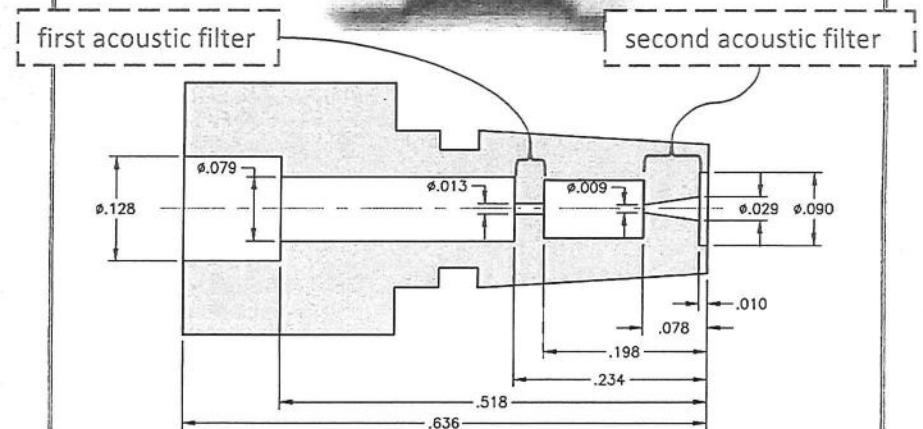


Comparison of U.S. Patent No. 6,070,693 with Moldex BattlePlugs

Claim 3:

The hearing protector according to claim 1,
wherein said first and second acoustic filters are not identical.

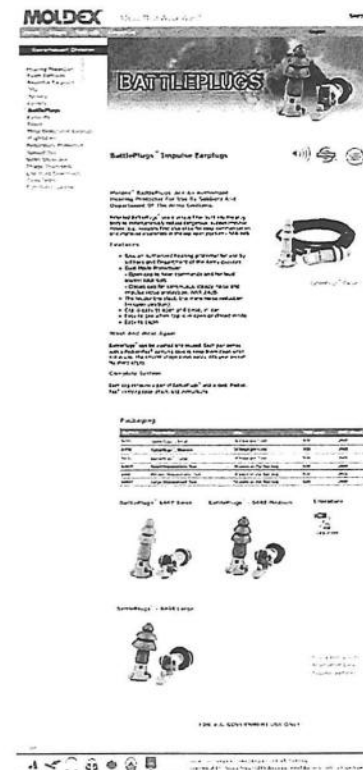
Therefore, Moldex BattlePlugs are hearing protectors wherein
the first and second acoustic filters are not identical.



Photograph & drawing of portions of a Moldex BattlePlug

The hearing protector according to claim 1,
wherein said acoustic filters permit non-linear filtration of sound.

Moldex BattlePlugs are hearing protectors according to claim 1.
[See Claim 1 above.]



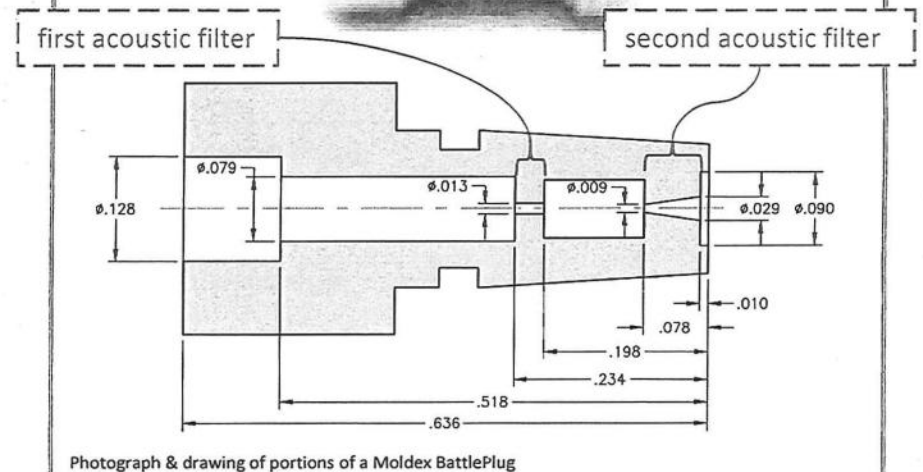
<http://www.moldex.com/government-division/hearing-protection/reusable-earplugs/battleplugs.php>

Comparison of U.S. Patent No. 6,070,693 with Moldex BattlePlugs

Claim 17:

The hearing protector according to claim 1,
wherein said acoustic filters permit non-linear filtration of sound.

The acoustic filters of Moldex BattlePlugs ...

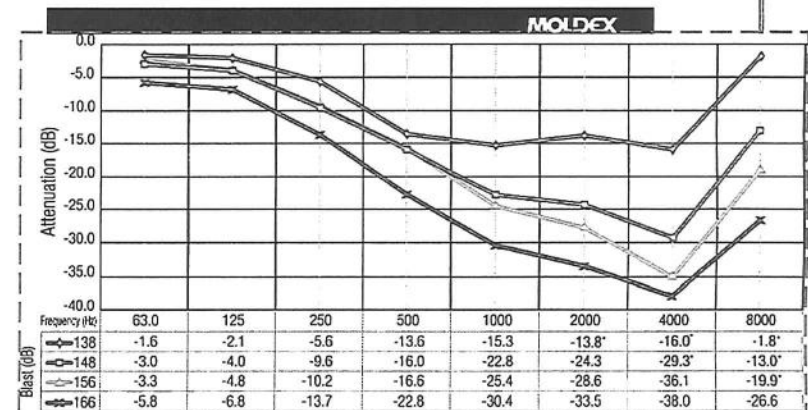


Comparison of U.S. Patent No. 6,070,693 with Moldex BattlePlugs

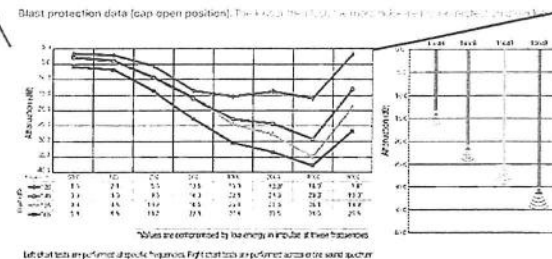
Claim 17:

The hearing protector according to claim 1,
wherein said acoustic filters permit non-linear filtration of sound.

The acoustic filters of Moldex BattlePlugs permit non-linear filtration of sound.



*Values are compromised by low energy in impulse at these frequencies



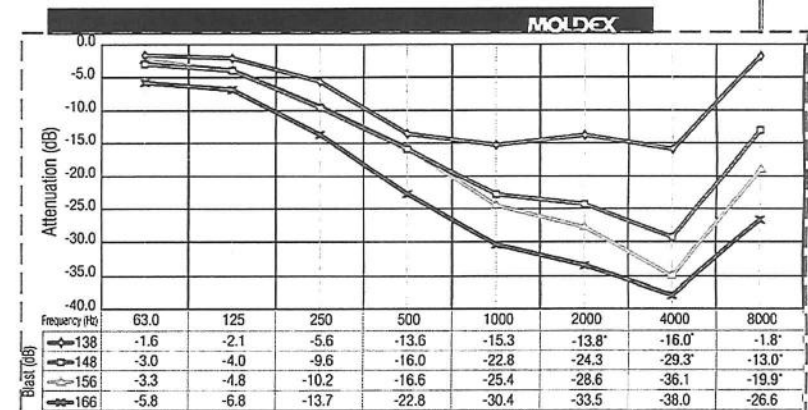
<http://www.moldex.com/pdf/datasheets/battleplugs-datasheet.pdf>

Comparison of U.S. Patent No. 6,070,693 with Moldex BattlePlugs

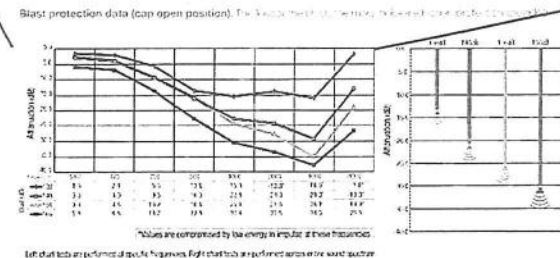
Claim 17:

The hearing protector according to claim 1,
wherein said acoustic filters permit non-linear filtration of sound.

Therefore, Moldex BattlePlugs are hearing protectors wherein
the acoustic filters permit non-linear filtration of sound.



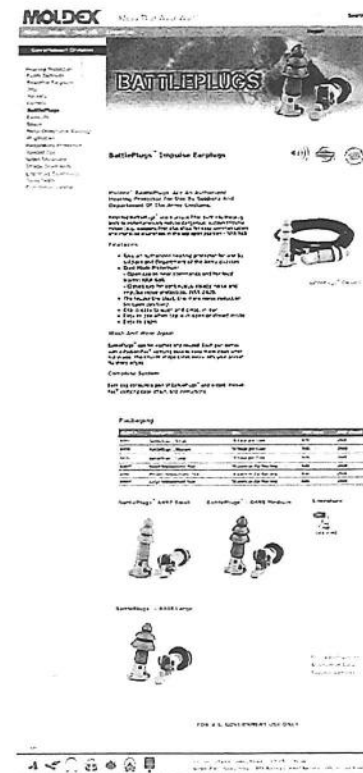
*Values are compromised by low energy in impulse at these frequencies



<http://www.moldex.com/pdf/datasheets/battleplugs-datasheet.pdf>

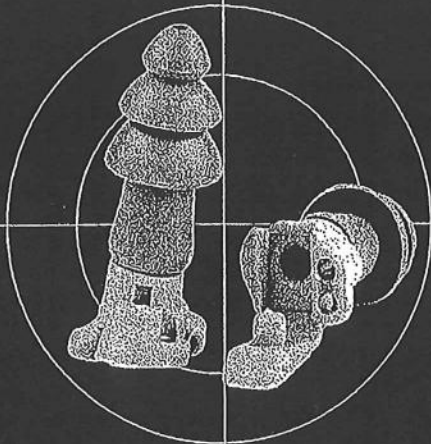
The hearing protector according to claim 1,
wherein said acoustic filters permit non-linear filtration of sound.

Because Moldex BattlePlugs satisfy each of the limitations of Claim 17, Moldex BattlePlugs infringe Claim 17.



<http://www.moldex.com/government-division/hearing-protection/reusable-earplugs/battleplugs.php>

Exhibit F



BATTLEPLUGS

Moldex BattlePlugs are now an authorized hearing protector for use by soldiers and Department of the Army civilians.



STATUS: UNCLASSIFIED

MOLDEX
Ideas that wear well.

BATTLEPLUGS

STATUS: UNCLASSIFIED

MOLDEX® BattlePlugs Impulse Earplugs

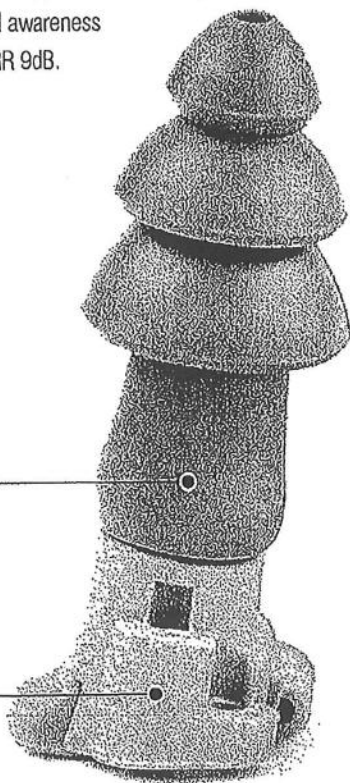
Patented Moldex BattlePlugs earplugs use a unique filter built into the plug body to instantaneously reduce dangerous, sudden impulse noises (e.g. weapons fire) plus allow for easy communication and improved awareness in the cap open position — NRR 9dB.



Closed Position

Unique patented plug design

Close cap for continuous/steady noise and impulse noise protection

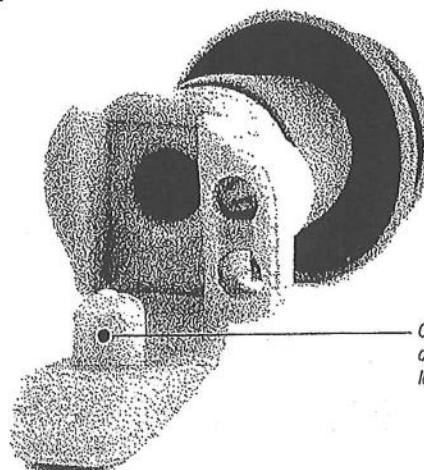


- Now an authorized hearing protector for use by soldiers and Department of the Army civilians.
- Dual Mode Protection.
 - Open cap to hear commands and for loud blasts.
 - Closed cap for continuous/steady noise and impulse noise protection.
- The louder the blast, the more noise reduction (in open position).
- Cap is easy to open and close, in-ear.
- Easy to see when cap is in open or closed mode.
- Easy to clean.



Open Position

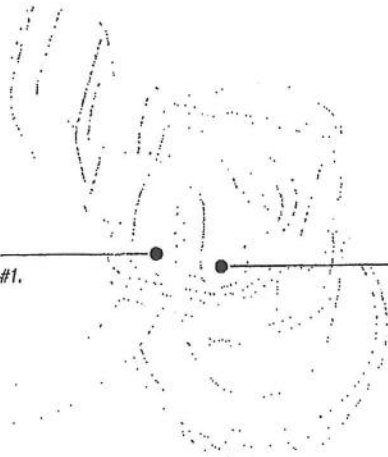
Open cap to hear commands and for loud blasts



BATTLEPLUGS Cording Instructions

Step 1

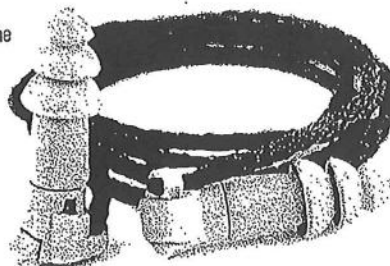
Thread cord through hole #1.



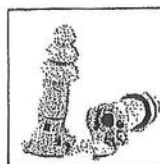
Step 2

Insert tip of cord into hole #2 to lock cord in place.

Ensure that cord does not interfere with the hinged cap fully closing. Failure to close the hinged cap completely may result in reduced noise attenuation.



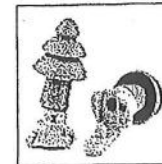
Available in 3 sizes



Small



Medium



Large



Fitting/Usage Instructions

Important Information

When cap is open, this earplug can be used to reduce impulse noises, such as gunfire, while also allowing you to hear low level noise. In closed cap position it can be used to help protect against continuous and impulse noises. Training is required. Before first use, practice opening and closing cap while plug is NOT in the ear canal.

Cautions

Improper fit and failure to wear at all times during exposure to loud noise, will reduce protection and result in hearing loss. Impulse noise will be louder with cap open than closed. Do not use with cap open during continuous high hazardous noise. Remove slowly by twisting to avoid damage to eardrum.

For use against continuous noise always wear with cap closed (Fig. 1)

- Before inserting plug check to see that cap is fully closed shut (Fig 1).
- Reach over the head and pull top of ear upwards (Fig 2).
- With other hand grasp plug handle and gently push and wiggle into ear canal until a good and comfortable seal is made.

For use against impulse noise when hearing other sounds/communication is also needed, wear with cap open (Fig. 3)

- If plug is already being worn with cap closed, you do not need to take plug out to open cap (Fig 4).
- To open cap, depending on the orientation of the handle, use either your thumb or index finger to gently push out on the cap latch while resting the other on the hinge, (this may take practice) (Fig 5).
- To insert plug with cap open, reach over the head and pull top of ear upwards (Fig 6).
- With other hand grasp plug handle and gently push and wiggle into the ear canal until plug is resealed and comfortable.

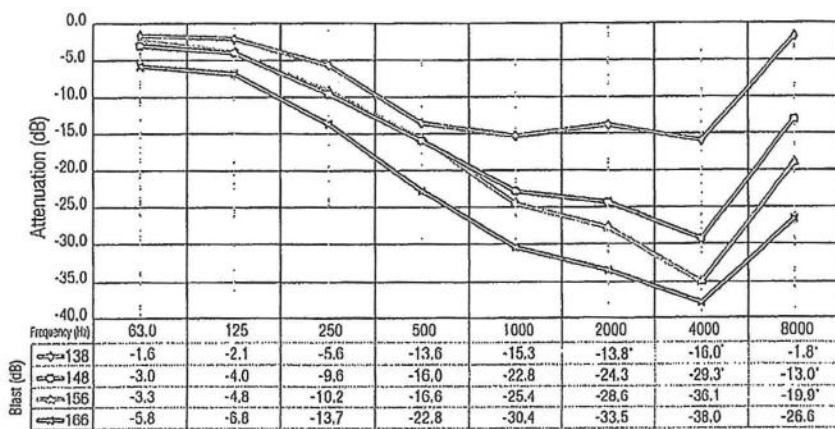
Closing cap with plug in ear.

- To close cap you do not need to take plug out.
- Depending on the orientation of the handle, use either your thumb or index finger to gently push the cap into the handle until it is fully shut, (this may take practice) (Fig 7).

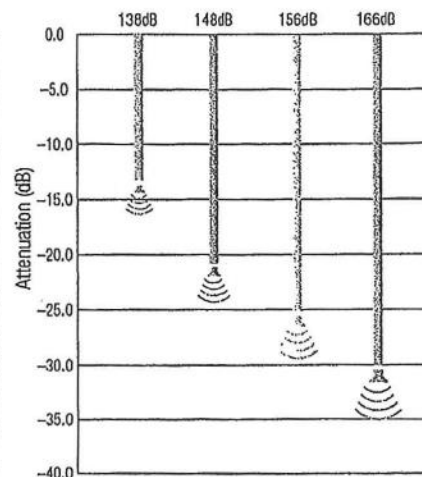
Easy to open and close in ear. Easy to see which mode is currently used.



Blast protection data (cap open position). The louder the blast, the more noise-reduction protection provided.



*Values are compromised by low energy in impulse at these frequencies



Left chart tests are performed at specific frequencies. Right chart tests are performed across entire sound spectrum.

BATTLEPLUGS

STATUS: UNCLASSIFIED

CAP CLOSED - PASSIVE NOISE LEVELS

ATTENUATION DATA / DATOS DE ATENUACIÓN / DONNÉES D'ATTÉNUATION

Tested According to ANSI Spec S3.19-1974 Michael & Assoc., State College, PA.
Prueba de acuerdo a las especificaciones ANSI S3.19-1974 Michael & Assoc., State College, PA.
Testé Conformé aux Spéc. ANSI S3.19-1974 Michael & Assoc., State College, PA.

Frequency (Hz) Frecuencia (Hz) Fréquence (Hz)	125	250	500	1000	2000	3150	4000	6300	8000		
Mean Attenuation (dB) Atenuación de Dato (dB) Atténuation Moyenne (dB)	31.3	27.0	34.2	30.7	36.1	40.9	34.1	31.1	32.3	NRR 24	CSA B
Standard Deviation (dB) Desviación Standard (dB) Écart Standard (dB)	4.8	4.2	4.0	3.3	3.7	4.1	3.2	2.7	3.5		

Noise Reduction Rating	24	DECIBELS (WHEN USED AS DIRECTED)
THE RANGE OF NOISE REDUCTION RATING FOR EXISTING HEARING PROTECTORS IS APPROXIMATELY 6 TO 35. HIGHER NUMBERS DENOTE GREATER EFFECTIVENESS.		
MOLDEX-METRIC, INC.	BattlePlugs	
Culver City, CA	#4197, #118, #142, #197, #101, #103	
Federal law prohibits removal of this label prior to purchase.		
LABEL REQUIRED BY EPA REGULATION 15 CFR PART 311 SUBPART B		

CAP OPEN - PASSIVE NOISE LEVELS

ATTENUATION DATA / DATOS DE ATENUACIÓN / DONNÉES D'ATTÉNUATION

Tested According to ANSI Spec S3.19-1974 Michael & Assoc., State College, PA.
Prueba de acuerdo a las especificaciones ANSI S3.19-1974 Michael & Assoc., State College, PA.
Testé Conformé aux Spéc. ANSI S3.19-1974 Michael & Assoc., State College, PA.

Frequency (Hz) Frecuencia (Hz) Fréquence (Hz)	125	250	500	1000	2000	3150	4000	6300	8000		
Mean Attenuation (dB) Atenuación de Dato (dB) Atténuation Moyenne (dB)	8.4	8.5	13.7	22.4	30.9	30.5	31.5	26.1	39.2	NRR 9	CSA C
Standard Deviation (dB) Desviación Standard (dB) Écart Standard (dB)	4.1	3.0	4.8	2.8	3.7	3.5	4.6	3.4	4.9		

Noise Reduction Rating	9	DECIBELS (WHEN USED AS DIRECTED)
THE RANGE OF NOISE REDUCTION RATING FOR EXISTING HEARING PROTECTORS IS APPROXIMATELY 6 TO 35. HIGHER NUMBERS DENOTE GREATER EFFECTIVENESS.		
MOLDEX-METRIC, INC.	BattlePlugs	
Culver City, CA	#4197, #118, #142, #197, #101, #103	
Federal law prohibits removal of this label prior to purchase.		
LABEL REQUIRED BY EPA REGULATION 15 CFR PART 311 SUBPART B		

CLEANING & INSPECTION

Wash with soap and water only, and dry thoroughly before re-wearing. Keep filter hole in tip and handle free of earwax, dirt and dust. Confirm filter holes are clear by holding plug up to light source. If you cannot see light shining through filter holes rewash and check again. If unable to clear filter holes, replace earplugs. Inspect plugs for any tears or damage each time they are worn and replace immediately if necessary.

WARNING TO USER

1. BattlePlugs reusable earplugs must be fitted and worn correctly to provide effective protection. Wash or clean hands before use. Plugs should be routinely washed with mild soap and warm water. CAUTION: Remove with a slow twisting motion to break the seal. Due to the tight seal, rapid removal may damage eardrum.
2. Use this laboratory-derived attenuation data for comparison purposes only. The amount of protection afforded in field use often is significantly lower depending on how the protectors are fitted and worn.
3. Failure to follow all instructions could result in hearing loss or injury. Failure to obtain a proper fit will reduce effectiveness of hearing protectors and could result in hearing loss or injury.
4. BattlePlugs must only be used as part of a hearing conservation program that complies with applicable local safety and health regulations.
5. Overprotection can be dangerous. The wearer must be able to hear warning signals.
6. Wearers with hearing loss should exercise extreme caution.
7. It is the employer's responsibility to ensure that the type of hearing protector and its NRR is appropriate for the user in their particular workplace.
8. Use caution when working around machinery or other equipment to ensure neck cord does not become caught or entangled.
9. Failure to follow these warnings could result in serious injury or death.
10. Although hearing protectors can be recommended for protection against the harmful effects of impulse noise, the Noise Reduction Rating (NRR) is based on the attenuation of continuous noise and may not be an accurate indicator of the protection attainable against impulse noise such as gunfire. (Wording required by EPA)

DISTRIBUTED BY:

ORDERING INFORMATION

SKU#	Plug Size	Qty./Case	Contents/Bag
6497	Small	50 Bags	Pair of BattlePlugs, cord, Pocket-Pak, [®] Chain, and Instructions
6498	Medium	50 Bags	Pair of BattlePlugs, cord, Pocket-Pak, [®] Chain, and Instructions
6499	Large	50 Bags	Pair of BattlePlugs, cord, Pocket-Pak, [®] Chain, and Instructions

Replacement Tips

6487T	50 Pairs of Small Replacement Tips in Zip-Top Bag
6488T	50 Pairs of Medium Replacement Tips in Zip-Top Bag
6489T	50 Pairs of Large Replacement Tips in Zip-Top Bag

LIMITED WARRANTY IMPORTANT NOTICE TO PURCHASER

This limited warranty is made in lieu of the warranties of merchantability, fitness for particular purposes and all other warranties, express or implied. There are no other warranties which extend beyond the description on the face hereof. The physical standards and specifications of Moldex will be met by products sold. Exclusive Remedies: damages for the breach of this limited warranty are limited to the replacement of such quantity of Moldex products proved to be defectively manufactured. Except as provided above, Moldex shall not be liable or responsible for any loss, damages, or liability, direct, indirect, incidental, special or consequential, arising out of a sale, use or misuse, or the inability to use products by the user.

Keep earplugs away from infants and small children as they may get caught in the windpipe and create a choking hazard.



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Tel: +1 (800) 421-0668 or +1 (310) 837-6500
Fax: +1 (310) 837-9563
Email: sales@moldex.com www.moldex.com

Moldex Technical Service Department:
+1 (800) 421-0668 or +1 (310) 837-6500 Ext. 512/550

Moldex, Ideas that wear well and the PVC-Free logo are registered trademarks. BattlePlugs is a trademark of Moldex-Metric, Inc. Made in U.S.A. Design Patent #D618333, other patent pending.

9900-035 REV D 11/11



Exhibit G



US005936208A

United States Patent [19]

Hamery

[11] Patent Number: 5,936,208

[45] Date of Patent: Aug. 10, 1999

[54] HEARING PROTECTOR AGAINST LOUD NOISES

[75] Inventor: Pascal Hamery, Mulhouse, France

[73] Assignee: Institut Franco-Allemand De
Recherches De Saint-Louis,
Saint-Louis Cedex, France

[21] Appl. No.: 08/994,015

[22] Filed: Dec. 18, 1997

[30] Foreign Application Priority Data

Sep. 18, 1997 [FR] France 97.11623

[51] Int. Cl.⁶ A61B 7/02

[52] U.S. Cl. 181/135

[58] Field of Search 181/130, 135;
128/864, 867; 2/209

[56] References Cited

U.S. PATENT DOCUMENTS

4,587,965	5/1986	De Boer et al.	126/867
4,852,683	8/1989	Killion	181/135
5,113,967	5/1992	Killion et al.	181/135

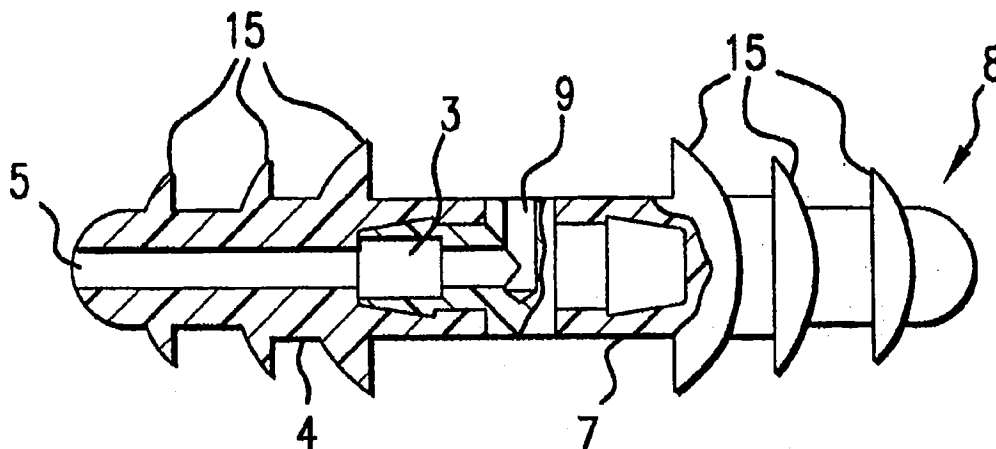
Primary Examiner—Khanh Dang

Attorney, Agent, or Firm—Oliff & Berridge, PLC

[57] ABSTRACT

The invention relates to a hearing protector for attenuating, selectively or not, noises that can have an intensity of up to 190 dB, designed to be inserted in sealing fashion into the auditory canal. The hearing protector includes a flexible cylindrical body that has a ferrule at each end. At least one of the two ferrules has a channel that runs from one end of the ferrule to the center of the cylindrical body and contains an acoustic filter. When the two ferrules each contain an acoustic filter, the filters may or may not be identical.

15 Claims, 3 Drawing Sheets



U.S. Patent

Aug. 10, 1999

Sheet 1 of 3

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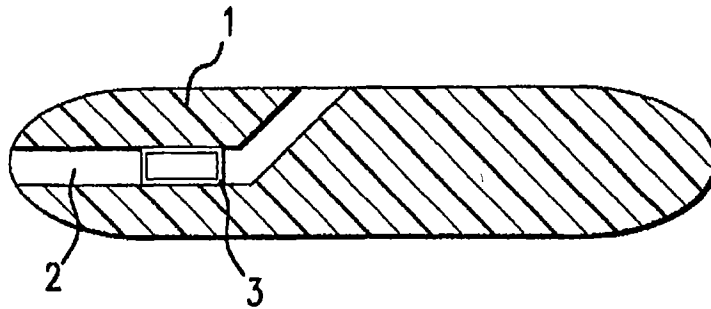


FIG. 1

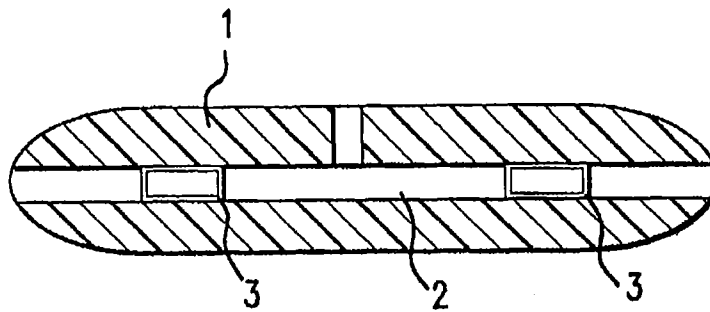


FIG. 2

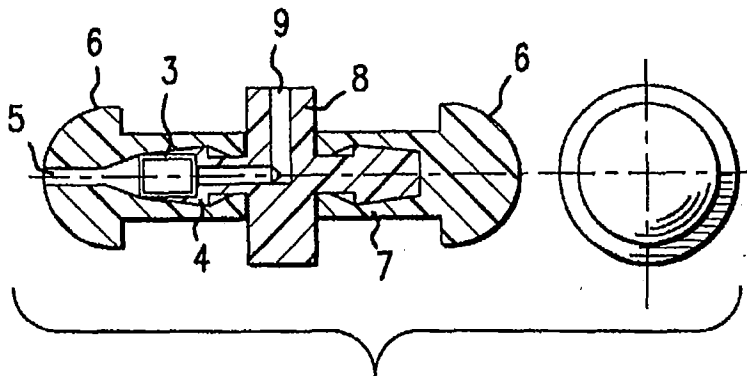


FIG. 3

U.S. Patent

Aug. 10, 1999

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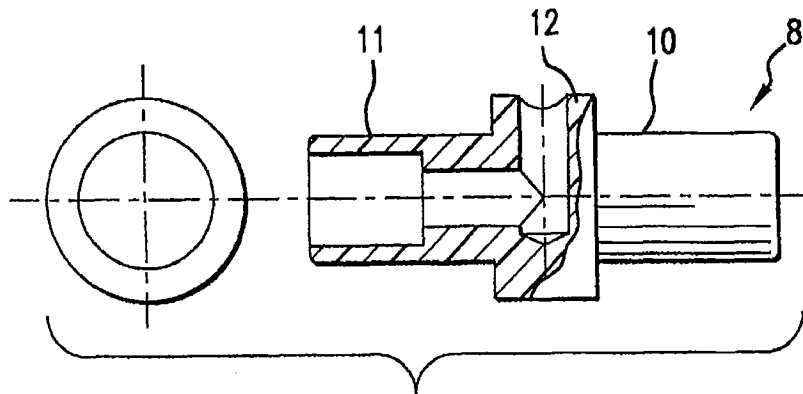


FIG. 4a

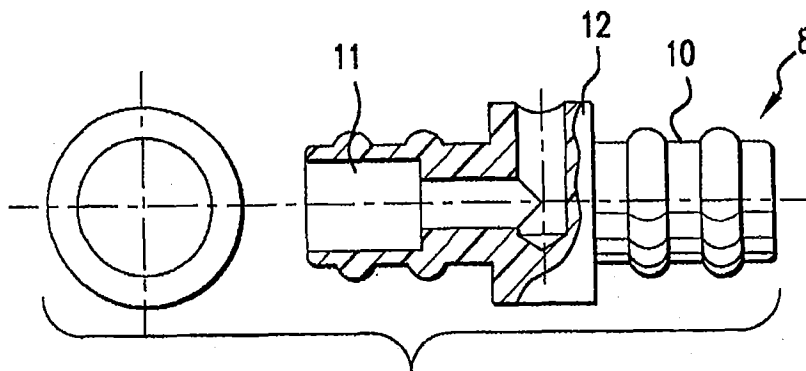


FIG. 4b

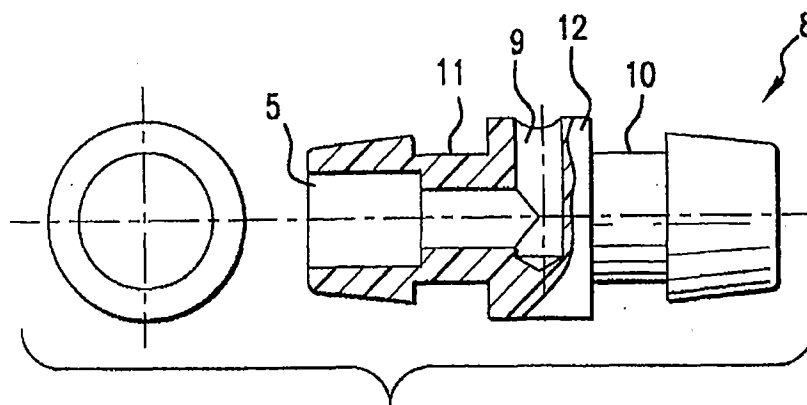


FIG. 4c

U.S. Patent

Aug. 10, 1999

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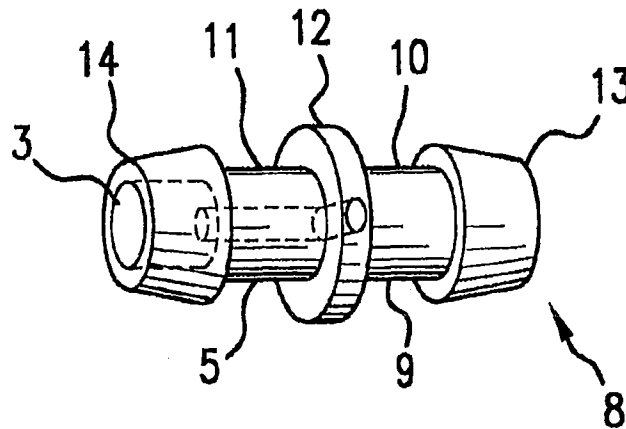


FIG. 5

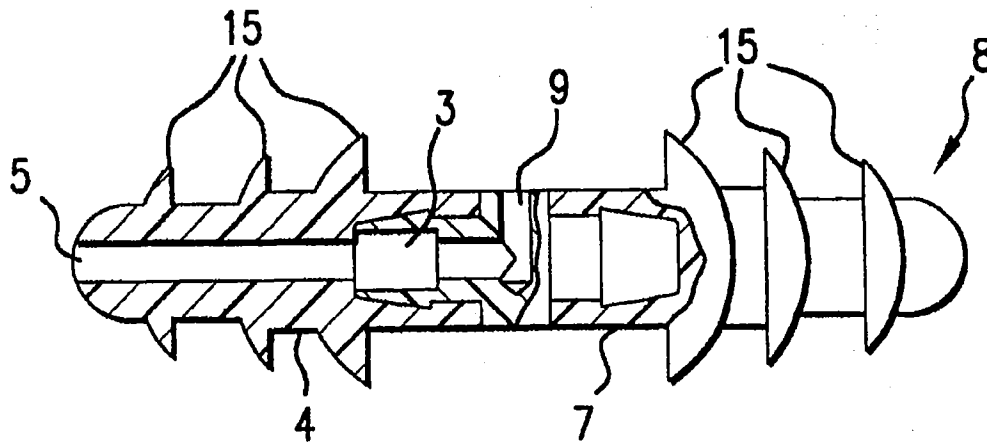


FIG. 6

5,936,208

1

HEARING PROTECTOR AGAINST LOUD NOISES

BACKGROUND OF THE INVENTION

1. Field of Invention

The invention relates to hearing protectors, and in particular, the invention relates to a hearing protector to protect against high, continuous or impulsive noises. The hearing protector can function either in a selective attenuation mode or a maximum attenuation mode.

2. Description of Related Art

In the selective attenuation mode, sound attenuation is low for a specific range of frequencies and increases for sounds with frequencies above those in the specified range. Selective attenuation is especially effective for the loudest noises. A sample application of a hearing protector operating in the selective attenuation mode is the intelligible speech transmission in a noisy environment caused by impulsive noises, such as gunshots, for example. In this case, the frequency range in which the attenuation is low is between 100 to 1000 Hz. In the maximum attenuation mode, the hearing protector stops all sounds throughout the frequency range, regardless of their intensity.

French Patent Publication No. 2 676 642, filed in the name of the Applicant, discloses a hearing protector that is not cumbersome and contacts the auditory canal. The protector comprises an elongate flexible body containing selective attenuation means, maximum attenuation means, and a manually controlled plug that makes it possible to choose the attenuation functional mode to be either selective or maximum. However, this device requires careful handling by the user who wants to block the auditory canal himself. This manipulation can be done incorrectly, resulting in inefficient blockage in the selective or maximum attenuation modes.

SUMMARY OF THE INVENTION

The goal of the present invention is to provide a reliable hearing protector that does not suffer from the disadvantage of user adjustment and permits two configurations for noise attenuation that have different characteristics.

Another goal of the present invention is to provide a reliable hearing protector capable of selectively or automatically attenuating noises having intensities up to 190 dB. The hearing protector is intended to be sealably inserted into the auditory canal of the user. The hearing protector includes a flexible cylindrical body having a ferrule at each end, with at least one of the ferrules having a channel that runs from one end of the ferrule to the center of the body and contains an acoustic filter.

The hearing protector has two ends, both of which can be inserted into the auditory canal and is referred to as a "double-ended" device. This contrasts with the well-known hearing protector that typically has one end that can be inserted into the auditory canal, while the other end allows the hearing protector to be gripped so the user can position it in the auditory canal. The present invention has two ends, that may or may not be identical, either of which can be inserted into the auditory canal, thus making it possible to choose between two operating modes of attenuation that may or may not be identical.

The device is useful in the fact that it possesses, in the same hearing protector, two configurations that can have different attenuation characteristics, both obtained by simply reversing the direction of the hearing protector, or ear plug, that is inserted into the auditory canal.

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In a preferred embodiment, the two ferrules are separate parts linked by an internal connector. The internal connector may be a single cylinder pierced by a channel containing an acoustic filter, the cylinder forming a right angle that terminates at a first end of the channel and a second end at the center of the connector.

The internal connector may also be a single cylinder having a channel that terminates at three locations, such as at the center of the connector or at each end of the connector, with the parts of the channel terminating at the ends containing an acoustic filter that may or may not be identical.

The internal connector may also be composed of three cylindrical parts. The central part may have a channel at its center with a diameter slightly greater than that of the other two parts. The other two parts have a diameter that is essentially equal to or slightly larger than that of the channel. At least one of the two parts is pierced by a channel at its center which contains an acoustic filter and communicates with the channel in the central part. When the two parts each contain an acoustic filter, the filters may or may not be identical.

In an alternate embodiment, the internal connector may have serrations, or ridges, to hold the ferrules in place while in the auditory canal.

In yet another embodiment, the hearing protector may have tapered ends.

Preferably, each ferrule of the hearing protector is provided with an essentially hemispherical face of which the narrower side is intended to be inserted first into the auditory canal.

Advantageously, the body of the hearing protector may be provided with flexible annular fins having a diameter that increases from the inside to the outside of the auditory canal in order to wedgingly secure it in the auditory canal.

The hearing protector makes it possible to perform nonlinear sound filtration by choosing the correct acoustic filter.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be described in conjunction with the following drawings in which like reference numerals designate like elements and wherein:

FIG. 1 is a longitudinal view, in partial section, of a "double-ended" hearing protector according to a preferred embodiment of the present invention;

FIG. 2 is a longitudinal section view of a "double-ended" hearing protector according to a second embodiment of the present invention;

FIG. 3 is a longitudinal section view of a "double-ended" hearing protector according to a third embodiment of the present invention;

FIG. 4a-4c are longitudinal views, in partial section, of different configurations of the internal connector that join the two ends of the hearing protector according to the present invention;

FIG. 5 is a perspective view of an internal connector for the two ends of the hearing protector according to an embodiment of the present invention;

FIG. 6 is a longitudinal view, in partial section, of a hearing protector according to a fourth embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

FIG. 1 is a longitudinal view, in partial section, of the hearing protector according to one preferred embodiment of

5,936,208

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the present invention. The hearing protector includes a body 1 that is molded to fit in the auditory canal of the user. The body 1 is pierced by a channel 2 that runs from an end of the body 1 and terminates in the center of the body 1. The channel 2 contains an acoustic filter 3 that allows for example the selective and nonlinear filtration of sound. The other end of the body 1 is not perforated and allows maximum attenuation, regardless of the frequency and amplitude of the sound. Ideally, the body 1 has a length between 2 cm and 4 cm and is composed of a flexible material.

FIG. 2 is a longitudinal section view of the hearing protector according to a second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1. The channel 2 also contains an acoustic filter 3 at each end. The filters may or may not be identical.

Referring to a third embodiment illustrated in FIG. 3, the hearing protector includes two cylindrical hollow ferrules 4 and 7 and an internal connector 8. The ferrules 4 and 7 are separate pieces that fit into one another and are joined by the internal connector 8 to keep the ferrules 4 and 7 together. Each ferrule 4 and 7 is provided with a substantially hemispherical face 6. The narrower portion of the face 6 is designed to be inserted first into the auditory canal. The substantially hemispherical face 6 ensures tightness between the hearing protector and the auditory canal. As illustrated in FIG. 3, at least one of the two ferrules, in this case, ferrule 4, is pierced by a channel 5 at its center. One of the two ends of the internal connector 8 that contains an acoustic filter 3 is inserted into at least one of the two ferrules 4 and 7. The acoustic filter 3 permits the selective non-linear filtration of sounds. The second ferrule, in this case, ferrule 7, need not be perforated and will allow maximum attenuation regardless of the frequency and amplitude of the sound. The internal connector 8 is pierced by a second channel 9 that connects at a first end with the first channel 5, which contains an acoustic filter 3, allowing for the use of the acoustic filter 3, and at a second end with the center of the connector 8. The second channel 9 is formed at a right angle to the channel 5.

Alternatively, in another embodiment, the internal connector 8 may also have a channel that extends in three locations, the center of the internal connector 8, as well as at each end of the internal connector 8. The portion of the channel that terminates at each end contains an acoustic filter 3 that may or may not be identical.

As shown in FIG. 4a, the internal connector 8 may include a single cylinder consisting of three cylindrical parts 10, 11, and 12. The central part 12 is pierced by a channel 9 at its center and has a diameter that is slightly larger than that of the other two parts 10 and 11. The two parts 10 and 11 have a diameter that is essentially equal to, but slightly larger than that of channel 5 in order to hold the assembly together. At least one of the two parts 10 and 11 is formed with channel 5, which contains an acoustic filter 3 and communicates with channel 9 in the central part 12, as shown in FIG. 5.

The internal connector 8 may have serrations, or ridges, as shown in FIGS. 4b and 6, or the internal connector 8 may have tapered ends 13 and 14, as shown in FIGS. 4c and 5. In the case when the internal connector 8 is in three parts, the two parts 10 and 11 will have the serrations, ridges, or tapered ends 13 and 14.

One of the two ferrules has a perforation that, when joined to connector 8, is aligned with that of the central end of channel 9 located in part 12.

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FIG. 6 is a longitudinal view, in partial section, of the hearing protector according to a fourth embodiment of the present invention. The hearing protector is provided with flexible annular fins 15 on the ferrules 4 and 7 to wedge the hearing protector against the walls of the auditory canal. The fins 15 may have a diameter that increases from the inside to the outside of the auditory canal.

The hearing protector, according to the present invention, is especially useful for individuals who are exposed to very loud engine and weapon noises, such as the crews of airplanes or military vehicles on exercises, for example. The hearing protector, according to the present invention, can also be used effectively by other personnel exposed to high-intensity noises in their working environments, such as construction sites and quarries for example.

While this invention has been described in conjunction with specific embodiments thereof, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art. Accordingly, the preferred embodiments of the invention as set forth herein are intended to be illustrative, not limiting. Various changes may be made without departing from the spirit and scope of the invention as defined in the following claims.

What is claimed is:

1. A hearing protector capable of selectively or automatically attenuating noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:

a cylindrical body having a center, a first end and a second end;

a channel extending from at least one of said first and said second ends of said body to said center of said body; said channel contains an acoustic filter; and

a ferrule at each of said first and said second ends, wherein said ferrules are separate and said cylindrical body forms an internal connector linking said ferrules.

2. The hearing protector according to claim 1, wherein said internal connector is a single cylinder, said channel forming a right angle and having a first end of said channel containing said acoustic filter and terminating at at least one of said ferrules and a second end of said channel terminating in said center of said internal connector.

3. The hearing protector according to claim 1, wherein said channel in said internal connector terminates at said center of said internal connector and at said first end and said second end of said internal connector, said first end containing said acoustic filter and said second end containing a second acoustic filter.

4. The hearing protector according to claim 3, wherein said acoustic filter is identical to said second acoustic filter.

5. The hearing protector according to claim 3, wherein said acoustic filter is not identical to said second acoustic filter.

6. The hearing protector according to claim 1, wherein said internal connector includes a central cylindrical part having a central diameter, a first cylindrical part having a first diameter and containing said acoustic filter and a second cylindrical part having a second diameter, said central diameter being larger than said first diameter and said second diameter, said first diameter and said second diameter being larger than said channel.

7. The hearing protector according to claim 6, wherein said second cylindrical part contains said second acoustic filter.

8. The hearing protector according to claim 7, wherein said acoustic filter and said second acoustic filter are identical.

5,936,208

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9. The hearing protector according to claim 7, wherein said acoustic filter and said second acoustic filter are not identical.

10. The hearing protector according to claim 1, wherein said internal connector has serrations for securing said ferrules to said internal connector.

11. The hearing protector according to claim 1, wherein said internal connector has ridges for securing said ferrules to said internal connector.

12. The hearing protector according to claim 1, wherein said internal connector has tapered ends.

13. The hearing protector according to claim 1, wherein said ferrules each have an essentially hemispherical face

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having a narrow side, said narrow sides being designed to be inserted into the auditory canal of the user first.

14. The hearing protector of claim 1, wherein said cylindrical body is provided with annular fins, said fins having a diameter that increases from said first and second ends of said cylindrical body toward said center of said cylindrical body, the hearing protector being wedgingly securable within the auditory canal of the user.

15. The hearing protector according to claim 1, wherein said acoustic filter permits non-linear filtration of sound.

* * * * *

Exhibit H

UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA

3M COMPANY and
3M INNOVATIVE PROPERTIES
COMPANY,

Plaintiff,

vs.

MOLDEX-METRIC, INC.,

Defendant.

Civil No. 0:12-cv-00611-JNE-AJB

JURY TRIAL DEMANDED

**DEFENDANT MOLDEX-METRIC, INC.'S ANSWER,
AFFIRMATIVE DEFENSES, AND COUNTERCLAIMS**

Defendant Moldex-Metric, Inc. ("Moldex") answers the Complaint of 3M Company ("3M Co.") and 3M Innovative Properties Company ("3M Innovative Properties") (collectively, "3M") as follows:

MOLDEX'S INTRODUCTORY STATEMENT

This lawsuit is a transparent attempt by 3M to misuse the U.S. patent laws to disrupt sales by Moldex of important safety equipment to the United States Army.

Moldex, a leading U.S. manufacturer of worker protection and safety equipment, recently introduced a new and innovative ear protector, an earplug trade-named BattlePlug, for use by soldiers and others exposed to high intensity sounds. Recognizing the value of such a device, the United States Army has approved BattlePlug for use by the military, and it has begun purchasing these products for its soldiers. As a result, 3M's

previous dominance of the market for hearing protectors for the military has been challenged.

In this lawsuit, 3M asserts that BattlePlugs infringe unspecified claims of United States Patent No. 6,070,693 (the "'693 Patent"), supposedly assigned to and owned by 3M. As will be shown, no reasonable person skilled in the art could read the '693 patent claims as applying to the Battleplug and, if it were so read, the patent would, in light of decades of existing prior art, be invalid. In sum, an objective examination of the record will demonstrate that 3M's assertion of infringement against Moldex's BattlePlugs is baseless.

3M has also included in this lawsuit a claim that Moldex's Earmuff ear protectors infringe United States Patent No. 7,036,157 (the "'157 Patent"), supposedly assigned to and owned by 3M. However, Moldex began selling its accused Earmuffs in 2002, four years before the '157 was issued. And Moldex has been selling these products since the 2006 issuance of that patent without any objection from 3M. Only now, six years after the '157 issued, and ten years after Moldex began selling its accused products, has 3M asserted these unfounded claims against Moldex' Earmuff products. These facts suggest that 3M included the '157 patent in this case simply to distract from its baseless accusations against BattlePlugs.

Because Moldex is currently under a contract to provide certain of the accused products in large quantities to the United States military for use by thousands of military personnel, Moldex intends to seek swift adjudication of this matter by way of early dispositive motion practice and will pursue whatever other remedies are proper against

3M. As discovery has not yet begun in this action, Moldex reserves the right to amend its Answer and Counterclaims as it develops the factual record in this case.

PARTIES

1. Moldex lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

2. Moldex lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

3. Moldex admits that it is a California corporation with offices at 10111 W. Jefferson Blvd., Culver City, California 90232. Moldex denies the remaining allegations in this paragraph of the Complaint.

JURISDICTION AND VENUE

4. Moldex admits only that 3M's Complaint alleges patent infringement, which Moldex denies, and answering further, denies that subject matter jurisdiction exists in this court for some or all of the activities complained of by 3M. Moldex therefore denies the allegations in this paragraph of the Complaint.

5. Moldex admits only that it does business throughout the United States, including in the State of Minnesota. Moldex denies the remaining allegations in this paragraph of the Complaint.

6. Moldex denies that venue is proper in this district for some or all claims of patent infringement alleged by 3M. Moldex therefore denies the general allegations concerning venue in this paragraph of the Complaint and puts 3M to strict proof thereof.

3M'S PATENT-IN-SUIT

7. Moldex admits only that the United States Patent Office issued the '157 patent on June 6, 2000, entitled "Method of Producing a Hood, and a Hood Produced According to the Method," and that a true and correct copy of the '157 patent is attached to the Complaint as Exhibit A. Moldex denies the remaining allegations in this paragraph of the Complaint.

8. Moldex admits only that the United States Patent Office issued the '693 patent on June 6, 2000, entitled "Hearing Protector Against Loud Noise," and that a true and correct copy of the '693 patent is attached to the Complaint as Exhibit B. Moldex denies the remaining allegations in this paragraph of the Complaint.

9. Moldex lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

10. Moldex lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

11. Moldex admits only that 3M sells a product called "Combat Arms."
Moldex lacks knowledge or information sufficient to form a belief as to the truth or

falsity of the remaining allegations contained in this paragraph of the Complaint, and therefore denies them.

12. Moldex lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them.

DEFENDANT'S INFRINGING ACTIVITIES

13. Moldex admits only that a copy of marketing materials for what 3M refers to as the "M Series" earmuffs is attached to the Complaint as Exhibit C. Moldex denies the remaining allegations in this paragraph of the Complaint, including specifically the averment that Moldex's "M Series" products infringe any claim (though none is specifically identified by 3M) of the '157 patent.

14. Moldex admits that it makes a product known as the "BattlePlug" earplug and that a copy of marketing materials showing the BattlePlug earplug is attached as Exhibit D to 3M's Complaint. Moldex denies the remaining allegations in this paragraph of the Complaint, including specifically the averment that Moldex's Battleplug earplugs infringe any claim (though none is specifically identified by 3M) of the '693 patent.

15. Moldex admits that it maintains a website at www.moldex.com that provides contact information and information regarding Moldex products. Moldex denies the remaining allegations of this paragraph of the Complaint.

THE HARM TO 3M

16. Moldex denies the allegations in this paragraph of the Complaint. 3M has not suffered any harm due to the facts alleged in its Complaint.

17. Moldex denies the cursory allegations in this paragraph of the Complaint.

18. Moldex denies the cursory allegations suggesting that Moldex's conduct makes this an exceptional case, as alleged by 3M in this paragraph of the Complaint. Answering further, if this case is an exceptional case it is because of the conduct of 3M, not Moldex.

COUNT I: INFRINGEMENT OF THE '157 PATENT

19. Moldex incorporates by reference its responses set forth in Paragraphs 1-18 of the Answer as if fully set forth herein.

20. Moldex admits that it sells and has offered to sell the products identified in Exhibit C to the Complaint which 3M refers to as the "M Series" earmuffs. Moldex denies the remaining allegations in this paragraph of the Complaint.

21. Moldex denies the allegations in this paragraph of the Complaint.

22. Moldex admits that it sells and has offered to sell the products identified in Exhibit C to the Complaint which 3M refers to as the "M Series" earmuffs. Moldex denies the remaining allegations in this paragraph of the Complaint.

23. Moldex denies the allegations in this paragraph of the Complaint.

24. Moldex denies the allegations in this paragraph of the Complaint.

25. Moldex lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations contained in this paragraph of the Complaint, and therefore denies them and puts 3M to strict proof thereof.

COUNT II: INFRINGEMENT OF THE '693 PATENT

26. Moldex incorporates by reference its responses set forth in Paragraphs 1-25 of the Answer as if fully set forth herein.

27. Moldex admits that it sells and has offered to sell product known as the "BattlePlug" earplug and that a copy of marketing materials showing the BattlePlug earplug is attached as Exhibit D to 3M's Complaint. Moldex denies the remaining allegations in this paragraph of the Complaint.

28. Moldex admits that it sells and has offered to sell a product known as the "BattlePlug" earplug and that a copy of marketing materials showing the BattlePlug earplug is attached as Exhibit D to 3M's Complaint. Moldex denies the remaining allegations in this paragraph of the Complaint.

29. Moldex denies the allegations in this paragraph of the Complaint.

30. Moldex denies the allegations in this paragraph of the Complaint.

31. Moldex denies the allegations in this paragraph of the Complaint.

3M'S PRAYER FOR RELIEF

32. Moldex denies that 3M is entitled to any of the relief sought in Paragraph 1 of 3M's Prayer for Relief.

33. Moldex denies that 3M is entitled to any of the relief sought in Paragraph 2 of 3M's Prayer for Relief. *Inter alia*, 3M's claims for equitable relief are barred in whole, or in part, by the doctrine of unclean hands. 3M's lawsuit has been brought in bad faith, precluding 3M from seeking to invoke the Court's equitable jurisdiction.

34. Moldex denies that 3M is entitled to any of the relief sought in Paragraph 3 of 3M's Prayer for Relief.

35. Moldex denies that 3M is entitled to any of the relief sought in Paragraph 4 of 3M's Prayer for Relief.

36. Moldex denies that 3M is entitled to any of the relief sought in Paragraph 5 of 3M's Prayer for Relief.

AFFIRMATIVE DEFENSES

37. In asserting the following affirmative defenses to the Complaint, Moldex does not concede that it bears the burden of establishing any fact or proposition on any issue.

FIRST AFFIRMATIVE DEFENSE **(Non-Infringement)**

38. No product Moldex makes, markets, distributes, uses, sells, offers to sell, or for which Moldex offers to provide support services, infringes any patent-in-suit.

39. Moldex has neither contributed to nor induced another party's alleged infringement of any patent-in-suit.

40. Moldex has not infringed any patent-in-suit.

SECOND AFFIRMATIVE DEFENSE **(Invalidity)**

41. The claims of the patents-in-suit are invalid under Title 35 of the United States Code, including but not limited to 35 U.S.C. §§ 101, 102, 103, 112, 200 et seq., and 301 et seq.

THIRD AFFIRMATIVE DEFENSE

(Laches)

42. Plaintiff is barred from recovery for the alleged infringement of one or more of the patents-in-suit by the doctrine of laches.

FOURTH AFFIRMATIVE DEFENSE

(Prosecution History Estoppel and Disclaimer)

43. Plaintiff is barred from recovery for the alleged infringement of one or more of the patents-in-suit by the doctrines of prosecution history estoppel and/or prosecution disclaimer.

FIFTH AFFIRMATIVE DEFENSE

(Governmental Immunity Under 28 U.S.C. § 1498)

44. On information and belief, some or all of the activities of Moldex that are the subject of 3M's Complaint with respect to the '693 patent are and have been carried out by Moldex as a contractor for the United States Government. Furthermore, all such activities have been and are being carried out for the United States Government and with the Government's authorization or consent. Therefore, under 28 U.S.C. § 1498, 3M's sole remedy for the infringement alleged in the Complaint is a suit against the United States in the United Court of Federal Claims for recovery of 3M's reasonable and entire compensation for the alleged use of the '693 patent.

SIXTH AFFIRMATIVE DEFENSE

(Unclean Hands)

45. 3M's claims for equitable relief are barred in whole, or in part, by the doctrine of unclean hands. 3M's lawsuit has been brought in bad faith, precluding 3M from seeking to invoke the Court's equitable jurisdiction.

MOLDEX'S COUNTERCLAIMS

46. As counterclaims against 3M, Moldex alleges as follows:

JURISDICTION AND VENUE

47. These counterclaims are for declaratory judgments pursuant to 28 U.S.C. §§ 2201 and 2202. The Court has jurisdiction over these counterclaims as a controversy exists by virtue of 3M's claims recited in its Complaint and Moldex's above-stated denial of such averments.

48. Moldex's counterclaims arise under the United States Patent Laws, 35 U.S.C. §§ 101, 102, 103, 112, 200 et seq., and 300 et seq. To the extent that this court has jurisdiction over the subject matter of 3M's allegations of patent infringement, then this court also has jurisdiction over these counterclaims pursuant to 28 U.S.C. §§ 1331, 1338(a), and 1400(b).

49. This Court has personal jurisdiction over 3M on the bases that 3M purports to reside and do business in the State of Minnesota, including in this judicial district, and that 3M has submitted itself to the Court's jurisdiction by filing its Complaint in this Court. The exercise of jurisdiction for Moldex's counterclaims over 3M would be reasonable.

50. 3M has admitted that venue is proper in this Judicial District.

THE PARTIES

51. Moldex is a California corporation with offices at 10111 W. Jefferson Blvd., Culver City, California 90232.

52. On information and belief, Plaintiff 3M Co. is a corporation organized and existing under the laws of the state of Delaware, with its principal place of business at 3M Center, St. Paul, Minnesota.

53. On information and belief, Plaintiff 3M Innovative Properties is a corporation organized and existing under the laws of the state of Delaware, with its principal place of business at 3M Center, St. Paul, Minnesota.

FIRST COUNTERCLAIM
(Declaratory Judgment of Invalidity of the '157 Patent)

54. Moldex incorporates by reference the responses and allegations set forth in paragraphs 1-55 of this Answer and Counterclaims.

55. The '157 Patent is invalid for failure to comply with the requirements of Title 35 of the U.S. Code, including at least 35 U.S.C. §§ 101, 102, 103, 112, 200 et seq., and 301 et seq.

56. Moldex seeks a judgment declaring that the claims of the '157 patent are invalid.

SECOND COUNTERCLAIM
(Declaratory Judgment of Invalidity of the '693 Patent)

57. Moldex incorporates by reference the responses and allegations set forth in paragraphs 1-58 of this Answer and Counterclaims.

58. The '693 Patent is invalid for failure to comply with the requirements of Title 35 of the U.S. Code, including at least 35 U.S.C. §§ 101, 102, 103, 112, 200 et seq., and 301 et seq.

59. Moldex seeks a judgment declaring that the claims of the '693 Patent are invalid.

THIRD COUNTERCLAIM
(Declaratory Judgment of Non-Infringement of the '157 Patent)

60. Moldex incorporates by reference the responses and allegations set forth in paragraphs 1-61 of this Answer and Counterclaims.

61. No product Moldex makes, markets, distributes, uses, sells, offers to sell, or for which Moldex offers to provide support services, infringes the '157 Patent.

62. Moldex has neither contributed to nor induced another's infringement of the '157 Patent.

63. Moldex seeks a judgment declaring that the claims of the '157 Patent are not infringed and have not been infringed by Moldex.

FOURTH COUNTERCLAIM
(Declaratory Judgment of Non-Infringement of the '693 Patent)

64. Moldex incorporates by reference the responses and allegations set forth in paragraphs 1-65 of this Answer and Counterclaims.

65. No product Moldex makes, markets, distributes, uses, sells, offers to sell, or for which Moldex offers to provide support services, infringes the '693 Patent.

66. Moldex has neither contributed to nor induced another's infringement of the '157 Patent.

67. Moldex seeks a judgment declaring that the claims of the '693 Patent are not infringed and have not been infringed by Moldex.

JURY DEMAND

68. Pursuant to Fed. R. Civ. P. 38, Moldex demands a jury trial on all issues that may be so tried.

PRAYER FOR RELIEF

WHEREFORE, Moldex prays for judgment and relief as follows:

- A. Declaring that the '157 Patent is invalid;
- B. Declaring that the '693 Patent is invalid;
- C. Entering judgment that 3M is not entitled to damages for, or any form of injunctive relief against, any alleged infringement of the '157 Patent by Moldex;
- D. Entering judgment that 3M is not entitled to damages for, or any form of injunctive relief against, any alleged infringement of the '693 Patent by Moldex;
- E. Entering judgment that, based on the conduct of 3M, this is an exceptional case under 35 U.S.C. § 285 and awarding Moldex its costs and attorneys' fees; and
- F. Awarding Moldex such further and additional relief as the Court deems just and proper.

DATED: April 27, 2012

Respectfully submitted,

s/ Kevin D. Conneely
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Exhibit I

UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA

3M COMPANY and 3M INNOVATIVE
PROPERTIES COMPANY,

Plaintiffs,

vs.

MOLDEX-METRIC, INC.

Defendant.

Court File No.: 12-cv-611-JNE-FLN

JOINT CLAIM CONSTRUCTION STATEMENT OF THE PARTIES

Pursuant to the June 14, 2012 Scheduling Order [Docket No. 18], 3M Company and 3M Innovative Properties Company (collectively “3M” or “Plaintiffs”) and Moldex-Metric, Inc. (“Moldex” or “Defendant”) submit this Joint Claim Construction Statement.

As required by Paragraph (D)(4)(B) of the Scheduling Order, Appendix A, attached hereto, identifies the disputed claim terms, phrases, or clauses, along with each party’s proposed construction of each disputed claim term, phrase, or clause together with an identification of all references from the specification or prosecution history that support that construction, and where applicable, an identification of any extrinsic evidence known to the party on which it intends to rely either in support of its proposed construction of the claim or to oppose the other party’s proposed construction of the claim, including, but not limited to, as permitted by law, dictionary definitions, citations to learned treatises and prior art, and testimony of percipient and expert witnesses. The

parties reserve all objections and arguments related to the extrinsic and intrinsic evidence identified in Appendix A.¹

The parties hereby request that the Court schedule a Claim Construction hearing to determine the interpretation of the disputed claim terms. For that purpose, the parties are available to confer with the Court or its staff regarding an agreed briefing schedule. The parties propose that there be simultaneous opening briefs, simultaneous response briefs, and no reply briefs. In light of the upcoming Holidays, the existing obligations of the parties and their counsel in other litigated matters, and the current deadline for completing the Claim Construction hearing, such a conference is requested before November 15, 2012. In light of the nature of the claimed inventions and technology involved, Moldex does not propose that a separate tutorial be conducted in connection with the claim construction proceedings. 3M reserves the right to request such a tutorial to the extent that the Court may find that such a tutorial would be helpful or otherwise appropriate.

¹ The parties have not reached agreement on the proposed construction for any of the disputed claim terms. [See Dkt. No. 18 at Paragraph (D)(4)(A)]. The parties do not anticipate calling any witnesses at the Claim Construction hearing. [See Dkt. No. 18 at Paragraph (D)(4)(C)].

Date: November 1, 2012

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Date: November 1, 2012

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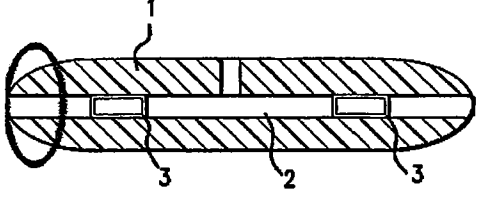
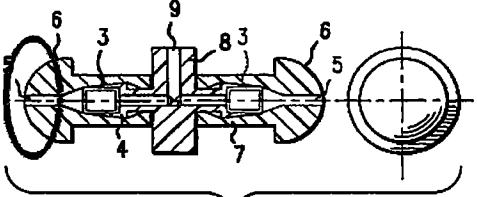
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**ATTORNEYS FOR DEFENDANT
MOLDEX-METRIC, INC.**

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
"a first end"; "said first... end[]"	1	Plaintiffs do not believe that construction of the identified term or phrase is necessary. If the Court believes construction is necessary, Plaintiffs believe that the plain and ordinary meaning of the term or phrase should apply.	"A first portion of a completed hearing protector constructed to be inserted into the user's auditory canal."	Intrinsic '693 Patent at Fig. 2:  FIG. 2 [Emphasis added.] '693 Patent at Fig. 3:  FIG. 3 [Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.] '693 Patent at 2:12-16 ("The internal connector may also be a single cylinder having a channel that terminates at three locations, such as at the center of the connector or at each end of the connector, with the parts of the channel terminating at the ends containing an acoustic filter that may or may not be identical.") [Emphasis added.]	Intrinsic "French Patent Publication No. 2 676 642, filed in the name of the Applicant, discloses a hearing protector that is not cumbersome and contacts the auditory canal. The protector comprises an elongate flexible body containing selective attenuation means, maximum attenuation means, and a manually controlled plug that makes it possible to choose the attenuation functional mode to be either selective or maximum. However, this device requires careful handling by the user who wants to block the auditory canal himself This manipulation can be done incorrectly, resulting in inefficient blockage in the selective or maximum attenuation modes." Col. 1:30-41. Emphasis added. "The hearing protector has two ends, both of which can be inserted into the auditory canal and is referred to as a "double-ended" device. This contrasts with the well-known hearing protector that typically has one end that can be inserted into the auditory canal, while the other end allows the hearing protector to be gripped so the user can position it in the auditory canal. The present invention has two ends, that may or

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>'693 Patent at 2:33-36 ("Preferably, each ferrule of the hearing protector is provided with an essentially hemispherical face of which the narrower side is intended to be inserted first into the auditory canal.") [Emphasis added.]</p> <p>'693 Patent at 3:16-22 ("FIG. 2 is a longitudinal section view of the hearing protector according to a second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1. The channel 2 also contains an acoustic filter 3 at each end.") [Emphasis added.]</p> <p>'693 Patent at 3:48-53 ("Alternatively, in another embodiment, the internal connector 8 may also have a channel that extends in three locations, the center of the internal connector 8, as well as at each end of the internal connector 8. The portion of the channel that terminates at each end contains an acoustic filter 3 that may or may not be identical.") [Referring to Fig. 3; emphasis added.]</p> <p>'693 Patent at Claim 1 ("1. A hearing protector for selectively or</p>	<p>may not be identical, either of which can be inserted into the auditory canal, thus making it possible to choose between two operating modes of attenuation that may or may not be identical." Col. 1:57-67. Emphasis added.</p> <p>"FIG. 2 is a longitudinal section view of a "double-ended" hearing protector according to a second embodiment of the present invention." Col. 2:52-54. Emphasis added.</p> <p>"FIG. 2 is a longitudinal section view of the hearing protector according to a second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1. The channel 2 also contains an acoustic filter 3 at each end. The filters may or may not be identical." Col. 3:17-23. Emphasis added.</p>

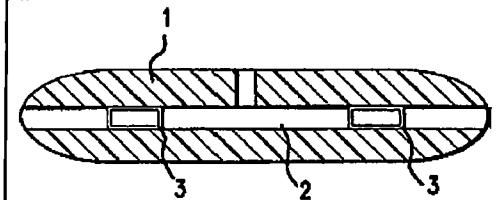
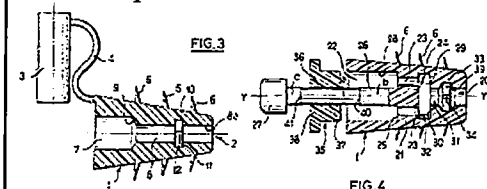
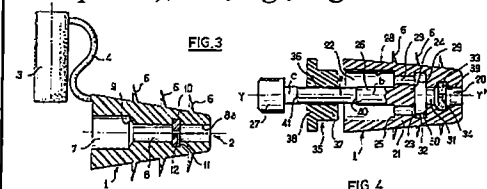


FIG.2


Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:</p> <ul style="list-style-type: none"> a cylindrical body having a center, a first end and a second end; a channel extending from said first and second ends to said center of said cylindrical body; and said channel containing a first acoustic filter and a second acoustic filter, each of said first and second filters being in communication with one of said first and second ends." <p>[Emphasis added.]</p> <p>US Patent 5,936,208 at Claim 1 ("1. A hearing protector capable of selectively or automatically attenuating noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:</p> <ul style="list-style-type: none"> a cylindrical body having a center, a first end and a second end; a channel extending from at least one of said first and said second ends of said body to said center of said body; 	<p>See also French Patent Publication No. 2 676 642 figures 3 and 4— intrinsic by way of the disclosure above—which further demonstrate that the '693 patent is directed toward an earplug with two insertable ends, not only one insertable end like the admitted prior art:</p>  <p>FIG. 3 FIG. 4</p> <p>Extrinsic</p> <p>Reference: French Patent Publication No. 2 676 642 to Dancer et al. (distinguished on the face of the '693 patent); See, e.g., Figs. 3 and 4:</p>  <p>FIG. 3 FIG. 4</p> <p>Reference: Empirical evaluation using impulse noise of the level-dependency of various passive earplug designs, Berger and Hamery (distinguishing single-ended earplugs from dual-ended earplugs): "The level- dependent data described herein for the dual-ended Combat Arms earplug have been found to also describe the simpler single-ended</p>

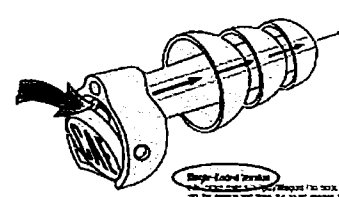

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence															
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's														
				<p>said channel contains an acoustic filter; and</p> <p>a ferrule at each of said first and said second ends, wherein said ferrules are separate and said cylindrical body forms an internal connector linking said ferrules.”) [Emphasis added.]</p> <p>US Patent 5,936,208 at Claim 13 (“13. The hearing protector according to claim 1, wherein said ferrules each have an essentially hemispherical face having a narrow side, said narrow sides being designed to be inserted into the auditory canal of the user first.”) [Emphasis added.]</p>	<p>version also containing the ISL filter in the stem of a premolded UltraFit® earplug as well as to the most recent single-ended design, also with an ISL filter that uses a selector dial.</p> <div><table><tr><th>Earplug</th><th>Description of level-dependent element</th></tr><tr><td>Amplifon (back view)</td><td>metal disc with 0.3-mm ID hole</td></tr><tr><td>Combat Arms Earplug</td><td>ISL filter with 0.3-mm ID hole at each end</td></tr><tr><td>Noise Breaker</td><td>rigid 0.3-mm tube; ID varies from 0.3 to 0.9 mm</td></tr><tr><td>Ear Valve</td><td>rubber diaphragm between metal plates</td></tr><tr><td>Sound Barrier</td><td>rubber diaphragm between metal and plastic plate</td></tr><tr><td>Quiet Places</td><td>stainless metal and fabric filter</td></tr></table><p>Figure 3 – Earplugs tested in this study as described in Table 1. Amplifon (back and front view), Combat Arms, Noise Breaker, Ear Valve, Sound Barrier, and Quiet Places (left to right, top to bottom).</p></div> <p>The plug that we have studied most thoroughly is the Combat Arms plug with the ISL filter. That filter, consisting of a small plastic canister with 0.3-mm inside diameter (ID) holes at each end has been imbedded in the stem of various versions of the UltraFit® earplugs, both dual-ended (as shown in Fig. 3) and single-ended designs. We begin by reporting data graphically in Fig. 4, for the dual-ended version of that product as illustrated in Fig. 3.” 3722. Emphasis added.</p> <p>Reference: 3M Combat Arms Marketing Materials (distinguishing single- ended earplugs from dual-ended earplugs):</p>	Earplug	Description of level-dependent element	Amplifon (back view)	metal disc with 0.3-mm ID hole	Combat Arms Earplug	ISL filter with 0.3-mm ID hole at each end	Noise Breaker	rigid 0.3-mm tube; ID varies from 0.3 to 0.9 mm	Ear Valve	rubber diaphragm between metal plates	Sound Barrier	rubber diaphragm between metal and plastic plate	Quiet Places	stainless metal and fabric filter
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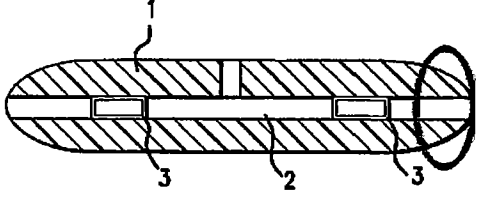
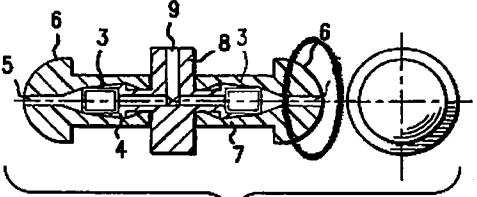
Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>Extrinsic</p> <p>Plaintiffs believe that the Court's Scheduling Order requires specific disclosure of intrinsic and extrinsic evidence in the creation and submission of the Joint Claim Construction Statement. Defendant has indicated an intention to:</p> <p>"In addition to the art identified above, for this and all other limitations identified in this document, Moldex may rely on statements made by 3M in its Responsive Prior Art Statement and Exhibits thereto, as well as the written references as discussed therein." [See Defendant's Preliminary Evidence to the right.]</p> <p>Plaintiffs believe that the use of evidence not specifically disclosed in the Joint Claim Construction Statement, or during the preparation of the Statement as set forth in the Court's Scheduling Order, is improper, and reserves the right to object to the same if Defendant proceeds in this fashion.</p>	<p>Combat Arms Earplugs</p> <p>Potential Seal Protection Design</p> <p>3M's Combat Arms Earplugs (CAE) meet the demanding hearing protection needs of the armed forces. In the Open-Molded Earplug mode, CAE allows positive mechanical compression from a common base, creating a seal against the ear canal and thereby with a filter element that acts to continuously provide mechanical protection. In the Closed/Conformal Protection mode, CAE provides against high level sound waves like those in a rocket launch and so on. The closed version of the Combat Arms Earplugs is a new design that makes them a more effective hearing protection device while the earplugs are in use.</p> <p>3M</p> <p>Explanation of the Hear-Through™ Protection Used by the Combat Arms Earplugs</p>  <p>Single-Lined Version</p> <p>The single-lined version of the earplug is designed to provide a seal against the ear canal and thereby with a filter element that acts to continuously provide mechanical protection. In the Closed/Conformal Protection mode, CAE provides against high level sound waves like those in a rocket launch and so on. The closed version of the Combat Arms Earplugs is a new design that makes them a more effective hearing protection device while the earplugs are in use.</p> <p>Dual-Lined Version</p> <p>The dual-lined version of the earplug is designed to provide a seal against the ear canal and thereby with a filter element that acts to continuously provide mechanical protection. In the Closed/Conformal Protection mode, CAE provides against high level sound waves like those in a rocket launch and so on. The closed version of the Combat Arms Earplugs is a new design that makes them a more effective hearing protection device while the earplugs are in use.</p>  <p>Emphasis added.</p> <p>In addition to the art identified above, for this and all other limitations identified in this document, Moldex may rely on statements made by 3M in its Responsive Prior Art Statement and Exhibits thereto, as well as the written references as discussed therein.</p>

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
<p>"a second end";</p> <p>"second end[]"</p>	1	<p>Plaintiffs do not believe that construction of the identified term or phrase is necessary.</p> <p>If the Court believes construction is necessary, Plaintiffs believe that the plain and ordinary meaning of the term or phrase should apply.</p>	<p>"A second portion of a completed hearing protector located at the opposite end of the hearing protector from the first end and constructed to be inserted into the user's auditory canal."</p>	<p>Intrinsic</p> <p>'693 Patent at Fig. 2:</p>  <p>FIG. 2</p> <p>[Emphasis added.]</p> <p>'693 Patent at Fig. 3:</p>  <p>FIG. 3</p> <p>[Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.]</p> <p>'693 Patent at 2:12-16 ("The internal connector may also be a single cylinder having a channel that terminates at three locations, such as at the center of the connector or at each end of the connector, with the parts of the channel terminating at the ends containing an acoustic filter that may or may not be identical.")</p> <p>[Emphasis added.]</p>	<p>Intrinsic</p> <p>"French Patent Publication No. 2 676 642, filed in the name of the Applicant, discloses a hearing protector that is not cumbersome and contacts the auditory canal. The protector comprises an elongate flexible body containing selective attenuation means, maximum attenuation means, and a manually controlled plug that makes it possible to choose the attenuation functional mode to be either selective or maximum. However, this device requires careful handling by the user who wants to block the auditory canal himself This manipulation can be done incorrectly, resulting in inefficient blockage in the selective or maximum attenuation modes." Col. 1:30-41. Emphasis added.</p> <p>"The hearing protector has two ends, both of which can be inserted into the auditory canal and is referred to as a "double-ended" device. This contrasts with the well-known hearing protector that typically has one end that can be inserted into the auditory canal, while the other end allows the hearing protector to be gripped so the user can position it in the auditory canal. The present invention has two ends, that may or</p>

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
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				<p>'693 Patent at 2:33-36 ("Preferably, each ferrule of the hearing protector is provided with an essentially hemispherical face of which the narrower side is intended to be inserted first into the auditory canal.") [Emphasis added.]</p> <p>'693 Patent at 3:16-22 ("FIG. 2 is a longitudinal section view of the hearing protector according to a second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1. The channel 2 also contains an acoustic filter 3 at each end.") [Emphasis added.]</p> <p>'693 Patent at 3:48-53 ("Alternatively, in another embodiment, the internal connector 8 may also have a channel that extends in three locations, the center of the internal connector 8, as well as at each end of the internal connector 8. The portion of the channel that terminates at each end contains an acoustic filter 3 that may or may not be identical.") [Referring to Fig. 3; emphasis added.]</p> <p>'693 Patent at Claim 1 ("1. A hearing protector for selectively or</p>	<p>may not be identical, either of which can be inserted into the auditory canal, thus making it possible to choose between two operating modes of attenuation that may or may not be identical." Col. 1:57-67. Emphasis added.</p> <p>"FIG. 2 is a longitudinal section view of a "double-ended" hearing protector according to a second embodiment of the present invention." Col. 2:52-54. Emphasis added.</p> <p>"FIG. 2 is a longitudinal section view of the hearing protector according to a second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1. The channel 2 also contains an acoustic filter 3 at each end. The filters may or may not be identical." Col. 3:17-23. Emphasis added.</p>

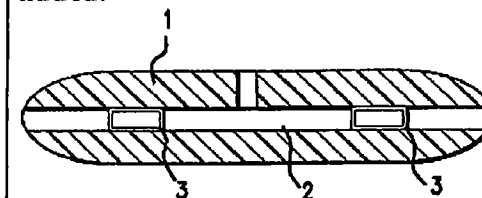
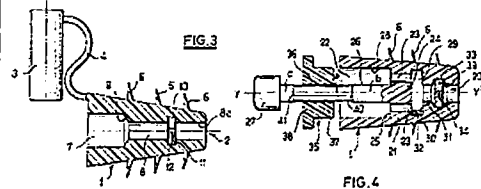
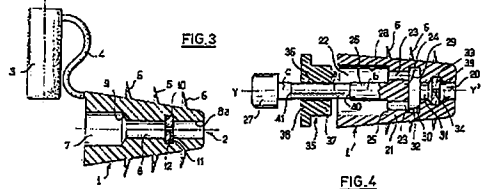


FIG.2


Joint Claim Construction Statement

U.S. Patent No. 6,070,693

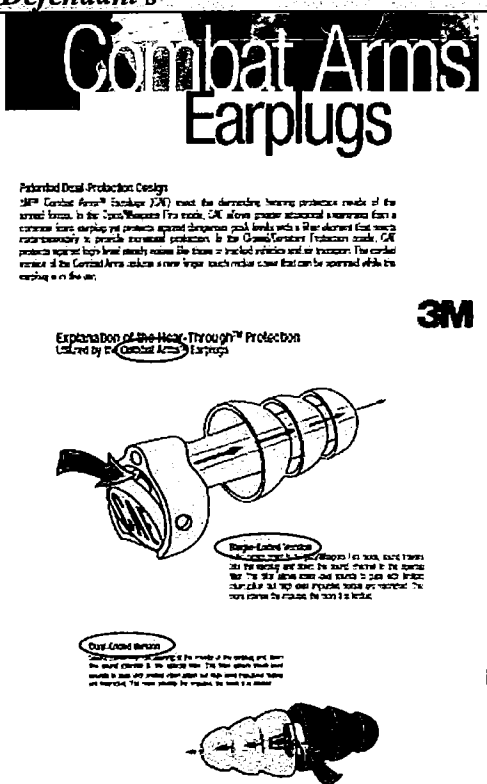
Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:</p> <ul style="list-style-type: none"> a cylindrical body having a center, a first end and a second end; a channel extending from said first and second ends to said center of said cylindrical body; and said channel containing a first acoustic filter and a second acoustic filter, each of said first and second filters being in communication with one of said first and second ends.”) [Emphasis added.] <p>US Patent 5,936,208 at Claim 1 (“1. A hearing protector capable of selectively or automatically attenuating noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:</p> <ul style="list-style-type: none"> a cylindrical body having a center, a first end and a second end; a channel extending from at least one of said first and said second ends of said body to said center of said body; 	<p>See also French Patent Publication No. 2 676 642 figures 3 and 4— intrinsic by way of the disclosure above—which further demonstrate that the ‘693 patent is directed toward an earplug with two insertable ends, not only insertable end like the admitted prior art:</p>  <p>Extrinsic</p> <p>Reference: French Patent Publication No. 2 676 642 to Dancer et al. (distinguished on the face of the ‘693 patent); See, e.g., Figs. 3 and 4:</p>  <p>Reference: Empirical evaluation using impulse noise of the level-dependency of various passive earplug designs, Berger and Hamery (distinguishing single-ended earplugs from dual-ended earplugs): “The level- dependent data described herein for the dual-ended Combat Arms earplug have been found to also describe the simpler single-ended</p>

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U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence															
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				<p>said channel contains an acoustic filter; and</p> <p>a ferrule at each of said first and said second ends, wherein said ferrules are separate and said cylindrical body forms an internal connector linking said ferrules.”) [Emphasis added.]</p> <p>US Patent 5,936,208 at Claim 13 (“13. The hearing protector according to claim 1, wherein said ferrules each have an essentially hemispherical face having a narrow side, said narrow sides being designed to be inserted into the auditory canal of the user first.”) [Emphasis added.]</p>	<p>version also containing the ISL filter in the stem of a premolded UltraFit® earplug as well as to the most recent single-ended design, also with an ISL filter that uses a selector dial.</p> <div><table><tr><th>Earplug</th><th>Description of level-dependent element</th></tr><tr><td>Amplifier Quietender</td><td>metal disc with 0.6 mm ID hole</td></tr><tr><td>3M A-100 Combat Arms Earplug</td><td>MSL filter with 0.5-mm ID hole at each end</td></tr><tr><td>Hochs Noise Breaker earplugs</td><td>separated 5.5-mm tube; ID varies from 0.3 to 0.5 mm</td></tr><tr><td>North Sonic Ear Valve® earplugs</td><td>rubber diaphragm between metal plates</td></tr><tr><td>Minicore® Earplug Sound Barrier</td><td>rubber diaphragm between metal and plastic plate</td></tr><tr><td>3M Quiet Place®</td><td>stained metal and fabric filters</td></tr></table><p>Figure 3 - Earplugs tested in this study as described in Table 1. Quietender (back and front views), Combat Arms, Noise Breaker, Ear Valve, Sound Barrier, and Quiet Place (left to right, top to bottom).</p></div> <p>The plug that we have studied most thoroughly is the Combat Arms plug with the ISL filter. That filter, consisting of a small plastic canister with 0.3-mm inside diameter (ID) holes at each end has been imbedded in the stem of various versions of the UltraFit® earplugs, both dual-ended (as shown in Fig. 3) and single-ended designs. We begin by reporting data graphically in Fig. 4, for the dual-ended version of that product as illustrated in Fig. 3.” 3722. Emphasis added.</p> <p>Reference: 3M Combat Arms Marketing Materials (distinguishing single- ended earplugs from dual-ended earplugs):</p>	Earplug	Description of level-dependent element	Amplifier Quietender	metal disc with 0.6 mm ID hole	3M A-100 Combat Arms Earplug	MSL filter with 0.5-mm ID hole at each end	Hochs Noise Breaker earplugs	separated 5.5-mm tube; ID varies from 0.3 to 0.5 mm	North Sonic Ear Valve® earplugs	rubber diaphragm between metal plates	Minicore® Earplug Sound Barrier	rubber diaphragm between metal and plastic plate	3M Quiet Place®	stained metal and fabric filters
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Minicore® Earplug Sound Barrier	rubber diaphragm between metal and plastic plate																		
3M Quiet Place®	stained metal and fabric filters																		

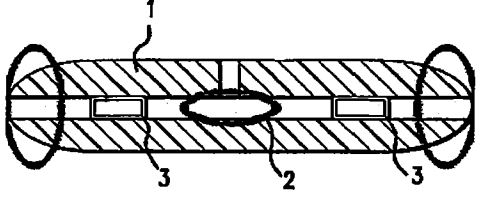
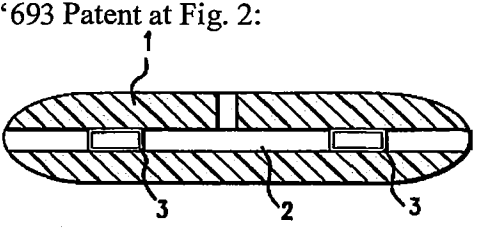
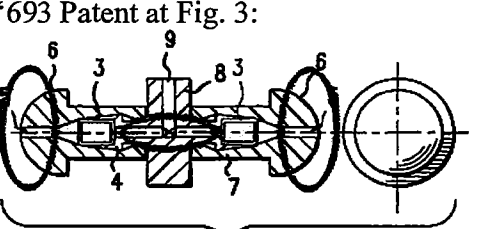
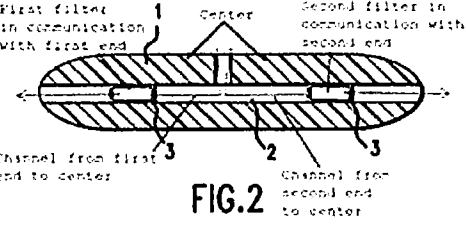
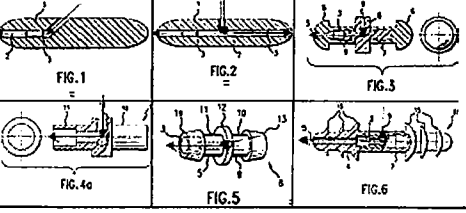
Joint Claim Construction Statement U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
					<div>  <p>Combat Arms Earplugs</p> <p>Patented Dual Protection Design 3M® Combat Arms® Earplugs (CAE) meet the demanding hearing protection needs of the armed forces. In the 3M®/Widex® 170 model, CAE allows greater situational awareness than a common foam earplug and protects against dangerous peak levels with a 15dB element that reacts instantaneously to provide maximal protection. In the 3M®/Widex® 170 model, CAE provides superior high-level sound exposure (the noise or impact) and no more. The curved surface of the Combat Arms® reduces a new finger touch method that can be worn while the earplug is in the ear.</p> <p>Explanation of the Hear-Through™ Protection (CAE) by the 3M®/Widex® Earplugs</p> <p>3M</p> <p>Single-Lined Version The single-lined version of the earplug is made of a single piece of foam. It is soft, comfortable and easy to insert. The single-lined version of the earplug is made of a single piece of foam. It is soft, comfortable and easy to insert. The single-lined version of the earplug is made of a single piece of foam. It is soft, comfortable and easy to insert.</p> <p>Double-Lined Version The double-lined version of the earplug is made of two pieces of foam. It is soft, comfortable and easy to insert. The double-lined version of the earplug is made of two pieces of foam. It is soft, comfortable and easy to insert. The double-lined version of the earplug is made of two pieces of foam. It is soft, comfortable and easy to insert.</p> </div>

Emphasis added.

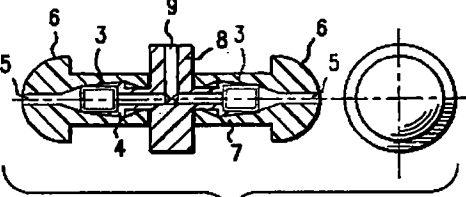
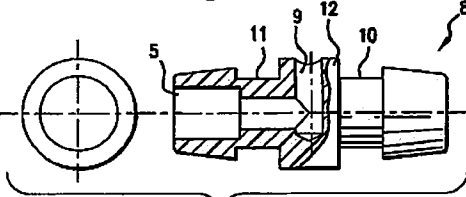
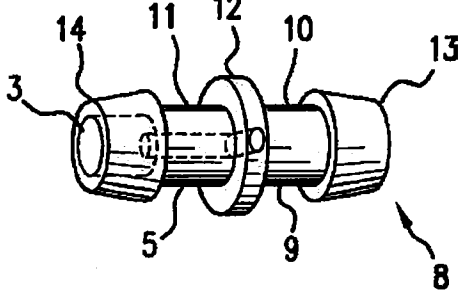

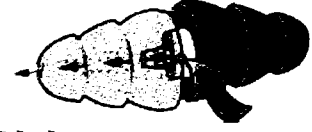
Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
"channel extending from said first and second ends to said center of said cylindrical body"	1	<p>Plaintiffs do not believe that construction of the identified term or phrase is necessary.</p> <p>If the Court believes construction is necessary, Plaintiffs believe that the plain and ordinary meaning of the term or phrase should apply.</p>	<p>"A channel that includes an opening at the center of the earplug to allow sound to enter the earplug at that center and extends to openings at said first and second ends to that center of the cylindrical body."</p>	<p>Intrinsic</p> <p>'693 Patent at Fig. 2:</p>  <p>FIG.2 [Emphasis added.]</p> <p>'693 Patent at Fig. 2:</p>  <p>FIG.2 [Emphasis added.]</p> <p>'693 Patent at Fig. 3:</p>  <p>FIG.3 [Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.]</p>	<p>Intrinsic</p> <p>"FIG. 2 is a longitudinal section view of the hearing protector according to a second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1. The channel 2 also contains an acoustic filter 3 at each end. The filters may or may not be identical." Col. 3:17-23. Emphasis added.</p> <p>Fig. 2, with annotations:</p>  <p>FIG.2</p> <p>Furthermore, although only Fig. 2 corresponds to the claims of the '693 patent, it is significant that every figure of the patent features a channel that includes an opening at the center of the earplug to allow sound to enter the earplug at that center, as shown below with emphasis added:</p> 

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Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>'693 Patent at Fig. 3:</p>  <p>FIG. 3 [Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.]</p> <p>'693 Patent at Fig. 4c:</p>  <p>FIG. 4c [Emphasis added.]</p> <p>'693 Patent at Fig. 5:</p>  <p>FIG. 5 [Emphasis added.]</p>	<p>Extrinsic</p> <p>Reference: 3M Combat Arms Marketing Materials (Note: reference shows a channel with an opening at center extending to one insertable end; the '693 patent specification corresponding to this limitation shows the channel extending to a second insertable end as well, as claimed).</p>  <p><small>Patented Dual Protection Design 3M Combat Arms® Earplugs (DB) and the distinctive foam earplugs made of the same foam as the Earplugs are used to block out noise and protect the ears from a variety of noise and sound. The Earplugs are made of a soft, pliable foam that can be shaped to fit the ear. The Earplugs are made of a soft, pliable foam that can be shaped to fit the ear. The Earplugs are made of a soft, pliable foam that can be shaped to fit the ear.</small></p> <p>3M</p> <p>Real-Ended Version</p> <p><small>Side cross-sectional view of the profile of the earplug and shows the internal channel of the earplug. The ear plug shows lower level channel to pass with limited compression but high level irregularities are indicated. The lower channel for insertion. The upper 1/2 is shown.</small></p>  <p>Emphasis added.</p>

Joint Claim Construction Statement

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Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>'693 Patent at 2:12-16 ("The internal connector may also be a single cylinder having a channel that terminates at three locations, such as at the center of the connector or at each end of the connector, with the parts of the channel terminating at the ends containing an acoustic filter that may or may not be identical.") [Emphasis added.]</p> <p>'693 Patent at 2:17-25 ("The internal connector may also be composed of three cylindrical parts. The central part may have a channel at its center with a diameter slightly greater than that of the other two parts. The other two parts have a diameter that is essentially equal to or slightly larger than that of the channel. At least one of the two parts is pierced by a channel at its center which contains an acoustic filter and communicates with the channel in the central part.") [Emphasis added.]</p> <p>'693 Patent at 2:31-32 ("In yet another embodiment, the hearing protector may have tapered ends.") [Emphasis added.]</p> <p>'693 Patent at 3:16-20 ("FIG. 2 is a longitudinal section view of the hearing protector according to a</p>	

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Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1.") [Emphasis added.]</p> <p>'693 Patent at 3:48-51 ("Alternatively, in another embodiment, the internal connector 8 may also have a channel that extends in three locations, the center of the internal connector 8, as well as at each end of the internal connector 8.") [Referring to Fig. 3; emphasis added.]</p> <p>'693 Patent at 3:64-66 ("The internal connector 8 may have serrations, or ridges, as shown in FIGS. 4b and 6, or the internal connector 8 may have tapered ends 13 and 14, as shown in FIGS. 4c and 5.") [Emphasis added.]</p> <p>'693 Patent at Claim 1 ("1. A hearing protector for selectively or automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising: a cylindrical body having a</p>	

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Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>center, a first end and a second end; a channel extending from said first and second ends to said center of said cylindrical body; and said channel containing a first acoustic filter and a second acoustic filter, each of said first and second filters being in communication with one of said first and second ends.”) [Emphasis added.]</p> <p>‘693 Patent at Claim 4 (“4. The hearing protector according to claim 1, further having a ferrule at each of said first and second ends wherein said ferrules are separate and said cylindrical body forms an internal connector linking said ferrules.”) [Emphasis added.]</p> <p>‘693 Patent at Claim 9 (“9. The hearing protector according to claim 4, wherein said internal connector includes a central cylindrical part having a central diameter, a first cylindrical part having a first diameter and a second cylindrical part having a second diameter, said central diameter being larger than said first diameter and said second diameter, said first diameter and said second diameter being larger</p>	

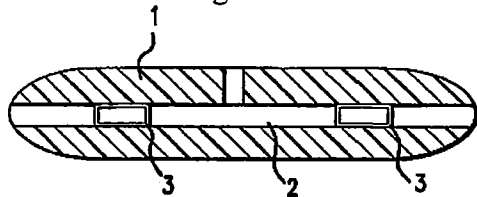
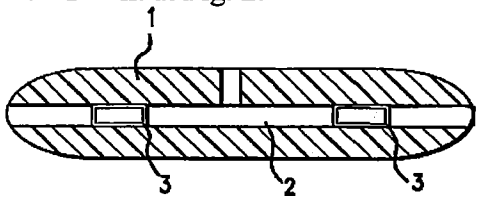
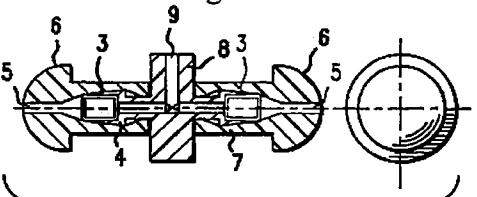
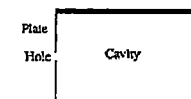
Joint Claim Construction Statement

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Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>than said channel, said first cylindrical part containing said first acoustic filter and said second cylindrical part contains said second acoustic filter.”) [Emphasis added.]</p> <p>‘693 Patent at Claim 14 (“14. The hearing protector according to claim 4, wherein said internal connector has tapered ends.”) [Emphasis added.]</p>	

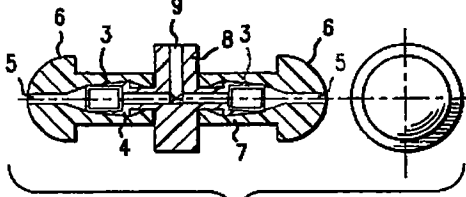

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Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
"acoustic filter"	1, 3, 17	<p>Plaintiffs do not believe that construction of the identified term or phrase is necessary.</p> <p>If the Court believes construction is necessary, Plaintiffs believe that the plain and ordinary meaning of the term or phrase should apply.</p>	<p>"A passageway with structural features that have the effect of modifying sound waves in the primary sound path, such as a passageway with more than one constriction in the primary sound path."</p>	<p>Intrinsic</p> <p>'693 Patent at Fig. 2:</p>  <p>FIG. 2 [Emphasis added.]</p> <p>'693 Patent at Fig. 2:</p>  <p>FIG. 2 [Emphasis added.]</p> <p>'693 Patent at Fig. 3:</p>  <p>FIG. 3 [Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.]</p>	<p>Extrinsic</p> <p>Reference: <i>Nonlinear Hearing Protection Devices</i>, P. Hamery and A. Dancer, page 6:</p> <p><i>ISL Filter</i></p> <p>As it seemed impractical to get better performances with a single plate as surmount, decided to study the characteristics of small cylindrical cavities terminated by two perforated plates. Extensive measurements allowed to determine the influence of the dimensions of the cavity, the thickness of the plates, the diameter of the holes... on the nonlinear performance.</p>  <p>FIGURE 5</p> <p>Schematic representation of the ISL Filter: overall length: 3.7 mm, outside diameter: 3.0 mm, inside diameter: 2.0 mm. The thickness of the perforated plates is 0.10 mm and the diameter of the holes is 0.30 mm.</p> <p>"The 'filter' which is represented in figure 5 corresponds to the best dimension/performance compromise: 'linear filter' version. It is made by plastic injection moulding (in two parts). As it is necessary to get precise and reproducible dimensions of the plates and of the holes as well as sharp edges and even surfaces to ensure good and uniform performances, the factory limits must be very strict.</p> <p>The outside dimensions of this filter allow its insertion in a classical earplug which I been chosen for its ergonomic business to fit, good sealing, comfort. In our study, we used a modified E.A.R. Ultrafit (with a sound passage - a small tube - between the two ends of the earplug).</p> <p>(emphasis added)</p> <p>Reference: <i>Empirical evaluation using impulse noise of the level-dependency of various passive earplug designs</i>, Berger and Hamery (distinguishing single-ended earplugs from dual-ended earplugs): "The level-dependent data described herein for the dual-ended Combat Arms earplug have been found to also describe the simpler single-ended version also containing the ISL filter in the stem of a premolded UltraFit® earplug as well as to the most recent single-ended design, also with an ISL filter that uses a selector dial.</p>

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Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence															
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's														
				<p>'693 Patent at Fig. 3:</p>  <p>FIG. 3 [Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.]</p> <p>'693 Patent at 2:12-16 ("The internal connector may also be a single cylinder having a channel that terminates at three locations, such as at the center of the connector or at each end of the connector, with the parts of the channel terminating at the ends containing an acoustic filter that may or may not be identical.") [Emphasis added.]</p> <p>'693 Patent at 2:23-27 ("At least one of the two parts is pierced by a channel at its center which contains an acoustic filter and communicates with the channel in the central part. When the two parts each contain an acoustic filter, the filters may or may not be identical.") [Emphasis added.]</p> <p>'693 Patent at 2:41-42 ("The hearing protector makes it possible to perform nonlinear sound filtration by choosing</p>	 <table><tr><th>Earplug</th><th>Description of level-dependent element</th></tr><tr><td>Amplifier/Condenser</td><td>metal plug with 0.6-mm ID hole</td></tr><tr><td>3A-RTB Combat Arms Earplug</td><td>ISL filter with 0.3-mm ID hole at each end</td></tr><tr><td>Holtek Noise Blocker earplugs</td><td>separated 5.5-mm tubes; ID varies from 0.3 to 0.9 mm</td></tr><tr><td>North Saddle Ear Valve earplugs</td><td>rubber diaphragm between metal plates</td></tr><tr><td>Silencer® Super Saver® earplugs</td><td>rubber diaphragm between metal and plastic plates</td></tr><tr><td>Two Quiet Places</td><td>sheltered metal and fabric filters</td></tr></table> <p>Figure 3 - Earplugs tested in this study as described in Table 1. Condenser (back and front view), Combat Arms, Noise Blocker, Ear Valve, Sound Barrier, and Quiet Places (left to right, top to bottom).</p> <p>The plug that we have studied most thoroughly is the Combat Arms plug with the ISL filter. That filter, consisting of a small plastic canister with 0.3- mm inside diameter (ID) holes at each end has been imbedded in the stem of various versions of the UltraFit® earplugs, both dual-ended (as shown in Fig. 3) and single-ended designs. We begin by reporting data graphically in Fig. 4, for the dual-ended version of that product as illustrated in Fig. 3." 3722. Emphasis added.</p> <p>Reference: J. Acoust. Soc. Am., Vol. 105, No. 2, Pt. 2, February 1999 Joint Meeting: ASA/EAA/DEGA 1130</p> <p>10:00 3aNSb6. Amplitude-sensitive attenuating earplugs. Pascal J. F. Hamery and Armand L. Dancer ~French-German Res. Inst. of Saint-Louis, 5 rue du General Cassagnou, BP 34, 68301 Saint-Louis Cedex,</p>	Earplug	Description of level-dependent element	Amplifier/Condenser	metal plug with 0.6-mm ID hole	3A-RTB Combat Arms Earplug	ISL filter with 0.3-mm ID hole at each end	Holtek Noise Blocker earplugs	separated 5.5-mm tubes; ID varies from 0.3 to 0.9 mm	North Saddle Ear Valve earplugs	rubber diaphragm between metal plates	Silencer® Super Saver® earplugs	rubber diaphragm between metal and plastic plates	Two Quiet Places	sheltered metal and fabric filters
Earplug	Description of level-dependent element																		
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3A-RTB Combat Arms Earplug	ISL filter with 0.3-mm ID hole at each end																		
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		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>the correct acoustic filter.”) [Emphasis added.]</p> <p>‘693 Patent at 3:21-23 (“The channel 2 also contains an acoustic filter 3 at each end. The filters may or may not be identical.”) [Emphasis added.]</p> <p>‘693 Patent at 3:51-53 (“The portion of the channel that terminates at each end contains an acoustic filter 3 that may or may not be identical.”) [Referring to Fig. 3; emphasis added.]</p> <p>‘693 Patent at Claim 1 (“1. A hearing protector for selectively or automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:</p> <ul style="list-style-type: none"> a cylindrical body having a center, a first end and a second end; a channel extending from said first and second ends to said center of said cylindrical body; and said channel containing a first acoustic filter and a second acoustic filter, each of said first and second filters being in communication with one of said first and second ends.”) [Emphasis added.] 	<p>France, dancer@newel.net</p> <p>The most simple amplitude-sensitive attenuating earplug is made of a plate with one little hole that is inserted in a perforated plug (like Racal Gunfender). That hole presents an acoustic impedance which has essentially a viscous resistance and a nonlinear dependence on the particle velocity in its center... The dimensions of that hole have been optimized and a new configuration, i.e., an empty cavity with two perforated plates, has been designed. This “filter” of small dimensions can easily be fitted into different commercial perforated earplugs.</p> <p>Emphasis added.</p> <p>Reference: <i>J. Acoust. Soc. Am.</i>, Vol. 103, No. 5, Pt. 2, May 1998 16th ICA/135th ASA—Seattle 2878</p> <p>2pNSb5. A new nonlinear earplug for use in high-level impulse noise environment. Armand L. Dancer and Pascal J-F. Hamery (French-German Res. Inst. of Saint-Louis, 5 rue du Gener. Cassagnou, BP 34, 68301 Saint-Louis Cedex, France, dancer@nucleus.fr)</p>

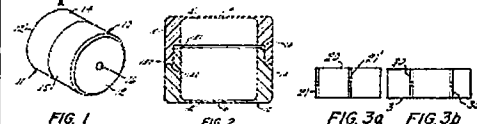
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Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>'693 Patent at Claim 2 ("2. The hearing protector according to claim 1, wherein said first and second acoustic filters are identical.") [Emphasis added.]</p> <p>'693 Patent at Claim 3 ("3. The hearing protector according to claim 1, wherein said first and second acoustic filters are not identical") [Emphasis added.]</p> <p>'693 Patent at Claim 17 ("17. The hearing protector according to claim 1, wherein said acoustic filters permit non-linear filtration of sound") [Emphasis added.]</p>	<p>A nonlinear earplug allows speech communication, detection and localization of acoustic sources, and prevents hearing hazard from high-peak pressure impulses. Improved physical characteristics of a nonlinear earplug are explained: nonlinear attenuation starting with relatively small level (110 dB peak) and improvement of nonlinear attenuation for high levels. Such an earplug is especially designed against weapon noises (up to 190 dB peak). The study is based on experimental approach. Moreover, a theoretical model has been developed to explain the experimental results and to optimize the acoustic nonlinear filter dimensions and configuration. The nonlinearity of such a filter is due to one (or several) little hole(s), the acoustic impedance of which is essentially a viscous resistive one and depends on the particulate velocity in its center.</p> <p>Emphasis added.</p> <p>Reference: <i>J. Acoust. Soc. Am.</i>, Vol. 114, No. 5, November 2003 Reviews of Acoustical Patents at 2540</p> <p>"6,068,079 43.50.Hg ACOUSTIC VALVE CAPABLE OF SELECTIVE NON-</p>

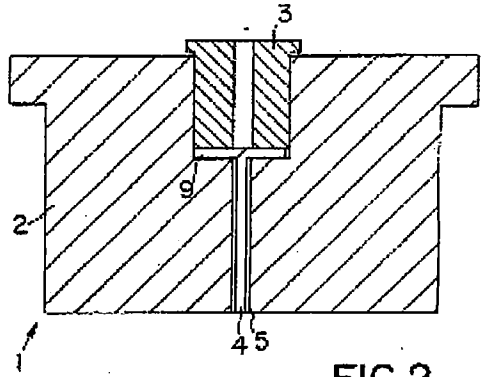
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Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
					<p>LINEAR FILTERING OF SOUND Pascal Hamery, Mulhouse, France et al., assignors to L. S. L. Institut Franco-Allemand de Recherches de Saint-Louis 30 May 2000 .Class 181Ö135.; filed 11 August 1997 This variable acoustic filter depends on the relative orientation between two rotatable discs. The filter can be incorporated into an earplug.—JE” (emphasis added)</p> <p>Reference: U.S. Pat. No. 6,068,079</p> <p>“Acoustic valve capable of selective and non-linear filtering of sound and placeable in a perforated ear plug. The acoustic valve consists of a tube enclosing two rigid disks axially spaced opposite each other, each of the disks containing at least one perforation. The total perforated surface of at least one disk is between 0.03 and 0.5 mm2.” Abstract. Emphasis added.</p>  <p>Reference: U.S. Pat. No. 4,587,965</p> <p>“FIG. 2 shows the filter” Col. 2:61; “FIG. 2 shows a filter 1 embodying the invention which comprises a</p>

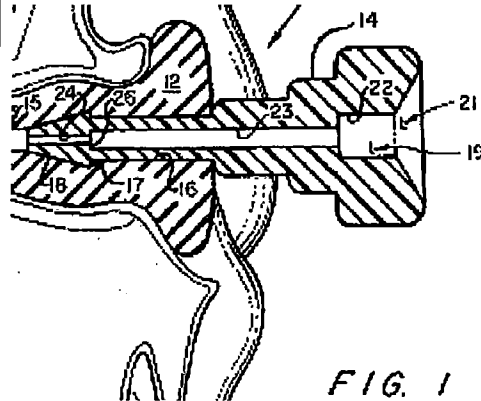
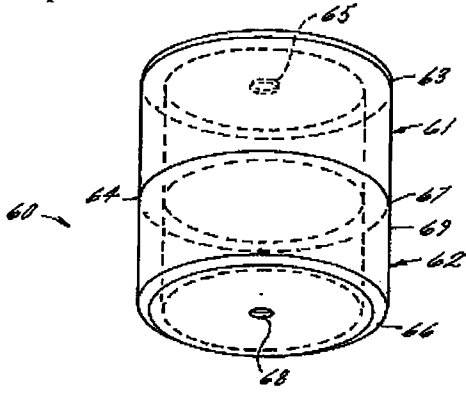
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					<p>fitting piece 2 in which an insertion piece 3 is arranged. The bore 5 is made in the fitting piece 2 and prolonges in the insertion piece 3. An elongate object, preferably a wire 4 is arranged in part of the bore 5 or in the whole bore 5 so that a part of the bore 5 has a considerably smaller free flow passage." Col. 3:29-36. Emphasis added.</p>  <p>FIG. 2</p> <p>Reference: U.S. Pat. No. 3,565,069</p> <p>"Thus, an acoustical filter element 14, lodged centrally of body 12, serves to restrict the passage therethrough of substantially all sound levels above a predetermined level, preferably established at the upper level of human speech. Accordingly, the transmission of noise levels via the filter element 14 is limited to those noise levels falling below a noise level on the order of 80</p>

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					<p>decibels.” Col. 2:3-9. Emphasis added.</p>  <p>FIG. 1</p> <p>Reference: U.S. Pat. No. 6,148,821</p> <p>“FIG. 4 is a perspective view of one embodiment of an acoustic filter of the present invention for use with the earplug of FIG. 1;” Col. 3:35-37. Emphasis added.</p>  <p>FIG. 4</p>

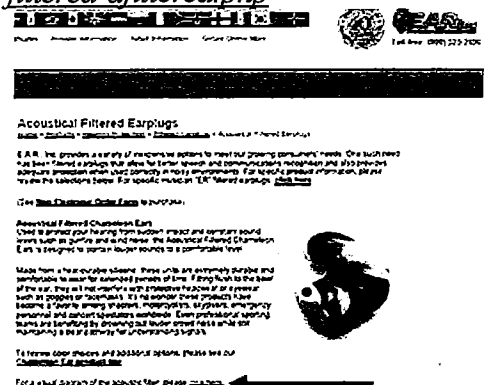
Joint Claim Construction Statement

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		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
					<p>"Now turning to FIGS. 1-3 wherein one embodiment of the selective attenuation earplug of the present invention is provided and is generally designated by reference numeral 10. Earplug 10 of this embodiment broadly comprises a stalk member 12, a stem 14, an acoustic filter 60 and an array of at least three rearwardly orientated and spaced apart flange elements 70, 80, and 90, each being of generally circular cross section. Preferably each flange element of the array extends rearwardly from its point of attachment to stalk member 12. It is within the scope of this invention that earplug 10 may comprise at least one flange extending from stalk member 12 wherein the flanges have a conical or arcuate shape." Col. 5:51-63. Emphasis added.</p> <p>FIG. 1</p>

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		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
					<p>Reference: USACHPPM <i>Just the Facts... The Combat Arms Earplug</i></p> <p>A small "filter" is inserted into the center (stem) of a one-sized, preformed earplug. This filter is a cylindrical device of a specified length (3.7 mm) with holes (0.30 mm) in each end.²</p> <p>[citing to] ²Dancer, A. and Hamery P., "Nonlinear Hearing Protection Devices," Proceedings of 27nd Annual Conference of the National Hearing Conservation Association, Albuquerque, New Mexico, 19-21 Feb 1998. Emphasis added.</p> <p>Reference: http://www.earinc.com/pl-filtered-afiltered.php</p>  <p>Emphasis added; acoustic filter image from link below:</p>

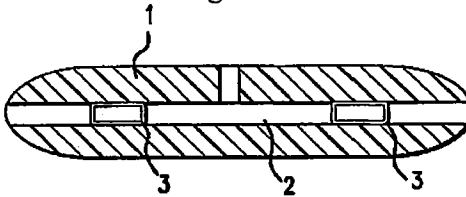
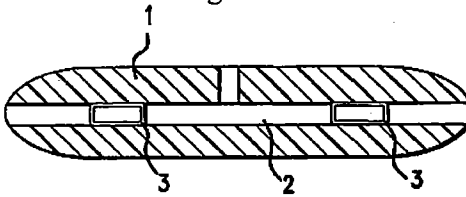
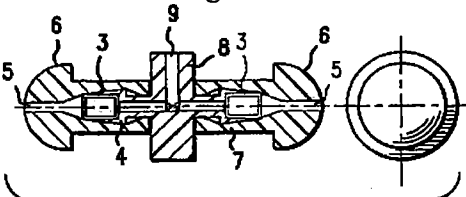
Joint Claim Construction Statement

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		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's

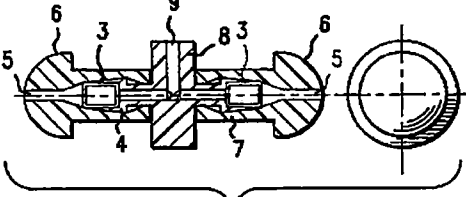
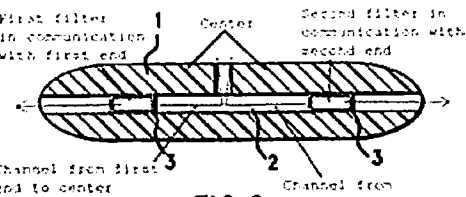
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Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
<p>"first acoustic filter and a second acoustic filter";</p> <p>"first and second acoustic filters";</p> <p>"acoustic filters"</p>	1, 3, 17	<p>Plaintiffs do not believe that construction of the identified term or phrase is necessary.</p> <p>If the Court believes construction is necessary, Plaintiffs believe that the plain and ordinary meaning of the term or phrase should apply.</p>	<p>"A first filter that attenuates the passage of sound in a primary sound path and a second filter that attenuates the passage of sound in a different primary sound path."</p>	<p>Intrinsic</p> <p>'693 Patent at Fig. 2:</p>  <p>FIG.2 [Emphasis added.]</p> <p>'693 Patent at Fig. 2:</p>  <p>FIG.2 [Emphasis added.]</p> <p>'693 Patent at Fig. 3:</p>  <p>FIG.3 [Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.]</p>	<p>Intrinsic</p> <p>"The hearing protector has two ends, both of which can be inserted into the auditory canal and is referred to as a "double-ended" device. This contrasts with the well-known hearing protector that typically has one end that can be inserted into the auditory canal, while the other end allows the hearing protector to be gripped so the user can position it in the auditory canal. The present invention has two ends, that may or may not be identical, either of which can be inserted into the auditory canal, thus making it possible to choose between two operating modes of attenuation that may or may not be identical." Col. 1:57-67. Emphasis added.</p> <p>"FIG. 2 is a longitudinal section view of the hearing protector according to a second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1. The channel 2 also contains an acoustic filter 3 at each end. The filters may or may not be identical." Col. 3:17-23. Emphasis added.</p>

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				<p>'693 Patent at Fig. 3:</p>  <p>FIG. 3</p> <p>[Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.]</p> <p>'693 Patent at 2:12-16 ("The internal connector may also be a single cylinder having a channel that terminates at three locations, such as at the center of the connector or at each end of the connector, with the parts of the channel terminating at the ends containing an acoustic filter that may or may not be identical.") [Emphasis added.]</p> <p>'693 Patent at 2:23-27 ("At least one of the two parts is pierced by a channel at its center which contains an acoustic filter and communicates with the channel in the central part. When the two parts each contain an acoustic filter, the filters may or may not be identical.") [Emphasis added.]</p> <p>'693 Patent at 3:21-23 ("The channel 2 also contains an acoustic filter 3 at</p>	<p>Fig. 2, with annotations:</p>  <p>FIG. 2</p>

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		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>each end. The filters may or may not be identical.”) [Emphasis added.]</p> <p>‘693 Patent at 3:51-53 (“The portion of the channel that terminates at each end contains an acoustic filter 3 that may or may not be identical.”) [Referring to Fig. 3; emphasis added.]</p> <p>‘693 Patent at Claim 1 (“1. A hearing protector for selectively or automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:</p> <ul style="list-style-type: none"> a cylindrical body having a center, a first end and a second end; a channel extending from said first and second ends to said center of said cylindrical body; and said channel containing a first acoustic filter and a second acoustic filter, each of said first and second filters being in communication with one of said first and second ends.”) [Emphasis added.] <p>‘693 Patent at Claim 2 (“2. The hearing protector according to claim 1, wherein said first and second</p>	

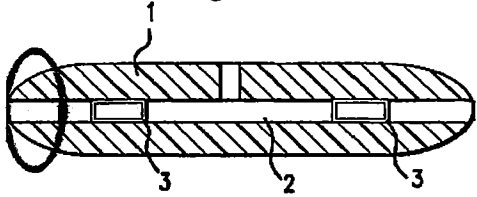
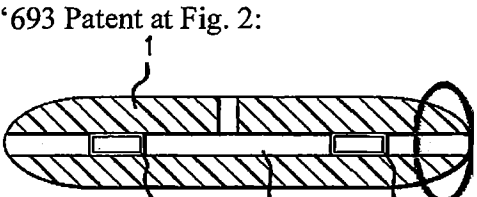
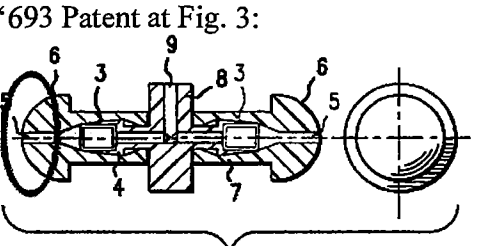
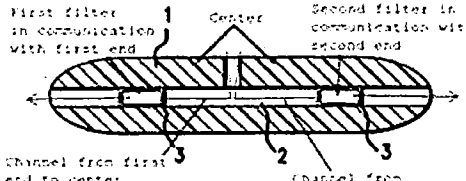
Joint Claim Construction Statement

U.S. Patent No. 6,070,693

<i>Claim Language to Be Construed</i>	<i>Claim(s)</i>	<i>Preliminary Proposed Construction</i>		<i>Preliminary Evidence</i>	
		<i>Plaintiffs'</i>	<i>Defendant's</i>	<i>Plaintiffs'</i>	<i>Defendant's</i>
				acoustic filters are identical.”) [Emphasis added.] ‘693 Patent at Claim 3 (“3. The hearing protector according to claim 1, wherein said first and second acoustic filters are not identical ”) [Emphasis added.] ‘693 Patent at Claim 17 (“17. The hearing protector according to claim 1, wherein said acoustic filters permit non-linear filtration of sound ”) [Emphasis added.]	

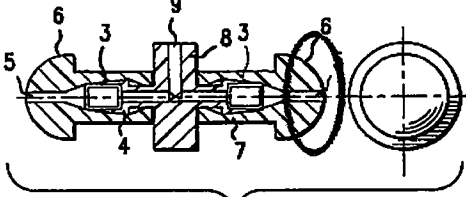
Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
"each of said first and second filters being in communication with one of said first and second ends"	1	Plaintiffs do not believe that construction of the identified term or phrase is necessary.	"A first filter being a part of a primary sound path from the sound entry hole at the center of the hearing protector to the first end and a second filter being a part of a different primary sound path from the sound entry hole at the center of the hearing protector to the second end."	<p>Intrinsic</p> <p>'693 Patent at Fig. 2:</p>  <p>FIG.2</p> <p>[Emphasis added.]</p> <p>'693 Patent at Fig. 2:</p>  <p>FIG.2</p> <p>[Emphasis added.]</p> <p>'693 Patent at Fig. 3:</p>  <p>FIG.3</p> <p>[Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.]</p>	<p>Intrinsic</p> <p>FIG. 2 is a longitudinal section view of the hearing protector according to a second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1. The channel 2 also contains an acoustic filter 3 at each end. The filters may or may not be identical." Col. 3:17-23. Emphasis added.</p> <p>Fig. 2, with annotations:</p>  <p>FIG.2</p>
		If the Court believes construction is necessary, Plaintiffs believe that the plain and ordinary meaning of the term or phrase should apply.			

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>'693 Patent at Fig. 3:</p>  <p>FIG.3</p> <p>[Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.]</p> <p>'693 Patent at 2:12-16 ("The internal connector may also be a single cylinder having a channel that terminates at three locations, such as at the center of the connector or at each end of the connector, with the parts of the channel terminating at the ends containing an acoustic filter that may or may not be identical.") [Emphasis added.]</p> <p>'693 Patent at 2:17-27 ("The internal connector may also be composed of three cylindrical parts. The central part may have a channel at its center with a diameter slightly greater than that of the other two parts. The other two parts have a diameter that is essentially equal to or slightly larger than that of the channel. At least one of the two parts is pierced by a channel at its center which contains an acoustic</p>	

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>filter and communicates with the channel in the central part. When the two parts each contain an acoustic filter, the filters may or may not be identical.” [Emphasis added.]</p> <p>‘693 Patent at 3:16-23 (“FIG. 2 is a longitudinal section view of the hearing protector according to a second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1. The channel 2 also contains an acoustic filter 3 at each end. The filters may or may not be identical.”) [Emphasis added.]</p> <p>‘693 Patent at 3:48-53 (“Alternatively, in another embodiment, the internal connector 8 may also have a channel that extends in three locations, the center of the internal connector 8, as well as at each end of the internal connector 8. The portion of the channel that terminates at each end contains an acoustic filter 3 that may or may not be identical.”) [Referring to Fig. 3; emphasis added.]</p> <p>‘693 Patent at Claim 1 (“1. A hearing protector for selectively or</p>	

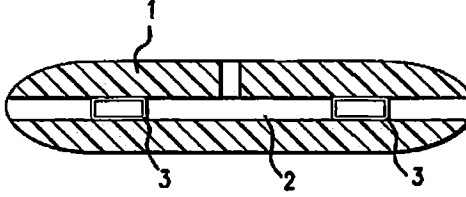
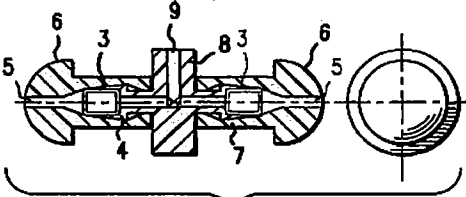
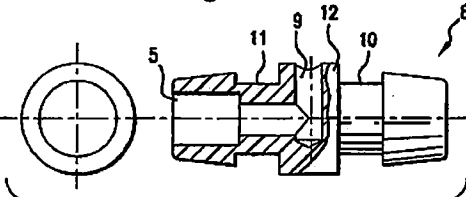
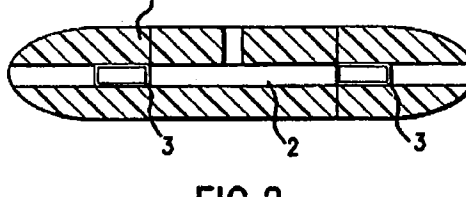
Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:</p> <ul style="list-style-type: none"> a cylindrical body having a center, a first end and a second end; a channel extending from said first and second ends to said center of said cylindrical body; and said channel containing a first acoustic filter and a second acoustic filter, each of said first and second filters being in communication with one of said first and second ends.”) [Emphasis added.] 	

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
"cylindrical body"	1	<p>Plaintiffs do not believe that construction of the identified term or phrase is necessary.</p> <p>If the Court believes construction is necessary, Plaintiffs believe that the plain and ordinary meaning of the term or phrase should apply.</p>	<p>"The portion of a completed hearing protector between the first and second ends, that has a cross section of the same size throughout."</p>	<p>Intrinsic</p> <p>'693 Patent at Fig. 2:</p>  <p>FIG. 2</p> <p>[Emphasis added.]</p> <p>'693 Patent at Fig. 3:</p>  <p>FIG. 3</p> <p>[Modified per alternative embodiment taught by '693 Patent at 3:48-53; emphasis added.]</p> <p>'693 Patent at Fig. 4c:</p>  <p>FIG. 4c</p> <p>[Emphasis added.]</p>	<p>Intrinsic</p>  <p>FIG. 2</p> <p>Emphasis added.</p> <p>Extrinsic</p> <p>Reference: <i>oxforddictionaries.com</i> Full URL: http://oxforddictionaries.com/definition/american_english/cylinder?region=us&q=cylindrical# cylinder 9</p> <p>Definition of <u>cylinder</u></p> <p><i>noun</i></p> <p><u>a solid geometric figure with straight parallel sides and a circular or oval section</u> <u>a solid or hollow body, object, or part having the shape of a cylinder</u></p> <ul style="list-style-type: none"> • a piston chamber in a steam or internal combustion engine. • a cylindrical container for liquefied gas under pressure. • a rotating metal roller in a printing press. • Archaeology a cylinder seal. <p>Derivatives</p> <p>cylindric</p> <p>Pronunciation: /səˈlɪndrɪk/ adjective</p> <p><u>cylindrical</u></p> <p>Reference: <i>Plaintiff's Amended Infringement Contentions Exhibit F</i> at page 13. This document recognizes the difference between cylindrical and conical shapes, as shown below:</p>

Appendix A Page 36 November 1, 2012

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>'693 Patent at 2:31-32 ("In yet another embodiment, the hearing protector may have tapered ends.") [Emphasis added.]</p> <p>'693 Patent at 3:16-20 ("FIG. 2 is a longitudinal section view of the hearing protector according to a second embodiment of the present invention. The hearing protector includes a body 1 pierced by a channel 2 that terminates at each end of the body 1, as well as the center of body 1.") [Emphasis added.]</p> <p>'693 Patent at 3:64-66 ("The internal connector 8 may have serrations, or ridges, as shown in FIGS. 4b and 6, or the internal connector 8 may have tapered ends 13 and 14, as shown in FIGS. 4c and 5.") [Emphasis added.]</p> <p>'693 Patent at Claim 1 ("1. A hearing protector for selectively or automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:</p> <ul style="list-style-type: none"> a cylindrical body having a center, a first end and a second end; a channel extending from said 	

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				<p>first and second ends to said center of said cylindrical body; and</p> <p>said channel containing a first acoustic filter and a second acoustic filter, each of said first and second filters being in communication with one of said first and second ends.")</p> <p>[Emphasis added.]</p> <p>'693 Patent at Claim 4 ("4. The hearing protector according to claim 1, further having a ferrule at each of said first and second ends wherein said ferrules are separate and said cylindrical body forms an internal connector linking said ferrules.")</p> <p>[Emphasis added.]</p> <p>'693 Patent at Claim 9 ("9. The hearing protector according to claim 4, wherein said internal connector includes a central cylindrical part having a central diameter, a first cylindrical part having a first diameter and a second cylindrical part having a second diameter, said central diameter being larger than said first diameter and said second diameter, said first diameter and said second diameter being larger than said channel, said first cylindrical part containing said first acoustic filter and said second</p>	

Joint Claim Construction Statement

U.S. Patent No. 6,070,693

Claim Language to Be Construed	Claim(s)	Preliminary Proposed Construction		Preliminary Evidence	
		Plaintiffs'	Defendant's	Plaintiffs'	Defendant's
				cylindrical part contains said second acoustic filter.”) [Emphasis added.] ‘693 Patent at Claim 14 (“14. The hearing protector according to claim 4, wherein said internal connector has tapered ends. ”) [Emphasis added.]	

Exhibit J

UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA

3M COMPANY and 3M INNOVATIVE PROPERTIES COMPANY, Plaintiffs, vs. MOLDEX-METRIC, INC., Defendant.	Court File No.: 12-cv-611 (JNE-FLN)
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3M'S RESPONSIVE PRIOR ART STATEMENT

Pursuant to the Court's June 14, 2012 Scheduling Order (Doc. 18), Plaintiffs 3M Company and 3M Innovative Properties Company (collectively, "3M") provide the following Responsive Prior Art Statement in response to Defendant Moldex-Metric, Inc.'s Prior Art Statement dated September 14, 2012 ("Moldex's Prior Art Statement").

I. 3M'S GENERAL RESPONSE TO DEFENDANT'S PRIOR ART

Defendant Moldex-Metric, Inc. ("Moldex" or "Defendant") served its Prior Art Statement on September 14, 2012, with attached exhibits. Exhibits A and B, attached hereto, provide 3M's positions, based on its investigation and the limited explanation provided by Moldex's Prior Art Statement, as to how the alleged prior art Moldex relies upon fails to read upon one or more claim elements of each asserted claim of U.S. Patent No. 6,070,693 (the "693 Patent") and U.S. Patent 7,063,157 (the "157 Patent"). Additional reasons may exist as to why the identified claim elements or other claim elements are not disclosed in the prior art identified by Moldex. 3M reserves the right to supplement and/or amend its Responsive Prior Art Statement as discovery and 3M's investigation continues. 3M further reserves all objections on

evidentiary or other valid grounds to Moldex's Prior Art Statement and any documents referenced in Moldex's Prior Art Statement.

II. 3M'S OBJECTIONS TO MOLDEX'S PRIOR ART STATEMENT

The purpose of serving invalidity contentions is to avoid the "shifting sands" approach to patent litigation whereby a party changes its invalidity position during the course of litigation. *Biogenex Labs., Inc. v. Ventana Med. Sys., Inc.*, No. 05-860, 2006 U.S. Dist. LEXIS 57067 at *9 (N.D. Cal. 2006). Disclosing invalidity contentions forces parties to crystallize and disclose their theories of the case early in litigation. *O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1366 n.12 (Fed. Cir. 2006) (internal citation omitted). In numerous respects, Moldex's Prior Art Statement fails to provide the detailed explanation of Moldex's invalidity contentions that the case law contemplates and that this Court required.

Moldex's Prior Art Statement fails to provide the "complete and detailed explanation of what [Moldex] alleges the prior art shows and how that prior art invalidates the claim(s) asserted," as required under the Court's Pretrial Scheduling Order. (See Doc. 18, ¶ E(1)). Moldex's Prior Art Statement omits any sufficient or legally tenable explanation of "how" the asserted prior art invalidates the asserted claims. Furthermore, many of Moldex's invalidity positions are inappropriately qualified, non-specific, or otherwise of insufficient detail to provide the "complete and detailed explanation" the Court required.

A. Moldex Provides Insufficiently Vague and Non-Specific Allegations.

Moldex's Prior Art Chart inappropriately contains misplaced non-infringement arguments, inaccurate descriptions of the Moldex accused products, and unsupported invalidity arguments that do not provide the "complete and detailed explanation" the Court required.

Often, Moldex's positions are so hedged or generalized as to leave 3M guessing as to Moldex's invalidity positions. For example:

- Moldex repeatedly suggests that the Moldex accused products are "like ... the prior art" and identifies alleged prior art "for example" but without providing a complete and detailed explanation of how the alleged prior art reads upon the limitations of the asserted patent claims. (*See, e.g.*, Moldex Prior Art Statement at pp. 2, 3, and 4). These type of exemplary or non-specific averments fail to provide the required explanation of Moldex's invalidity positions.
- Moldex alleges that "certain asserted claims" are allegedly defective but ultimately provides only purported "examples" of such claims with little, if any, detailed explanation for how such claims are legally defective. (*Id.* at pp. 5, 7-8).
- Moldex suggests that there are "relevant disclosures in the prior art" that were not quoted in Moldex's Prior Art Statement or attached charts, leaving 3M to figure out what allegedly "relevant disclosures" exist that Moldex neglected to quote. (*Id.* at p. 5).
- Moldex identifies other prior art "of potential relevance" to the asserted claims but omits any explanation of the prior art or why it is of "potential relevance" (*Id.* at p. 6).

B. Moldex Fails to Explain a Tenable Defense under 35 U.S.C. § 102(g).

Moldex fails to adequately explain or support its allegation of prior invention under 35 U.S.C. §102(g). The filing date of the '157 patent, based on its priority application, is July 8, 1998. The alleged 102(g) prior art is a combination of brief notebook entries by Terry Grimsley in July 1997 and the asserted "invention" shown in U.S. patent No. 5,829,062, filed on October

21, 1996 and issued on November 3, 1998 to Mark Magidson. Moldex asserts that Mr. Grimsley's work involved modeling a hearing protection hood made of hard polypropylene plastic with over-molded Kraton plastic which, Moldex argues, "reflected appreciation of the invention by the Moldex inventors of all limitations of the invention on or before July 30-31 1997."

This explanation, even if taken at face value, is legally insufficient. To prove a 102(g) defense, not only does the alleged prior activity have to be identical to that which was claimed, but the party asserting 102(g) must also provide evidence proving that the asserted subject matter was actually reduced to practice in this country—conception, alone, is insufficient—and that the purported invention was not abandoned, suppressed, or concealed. *See* 35 U.S.C. § 102(g). Any "failure to file a patent application; to describe the invention in a publicly disseminated document; or to use the invention publicly, have been held to constitute abandonment, suppression, or concealment." *Correge v. Murphy*, 705 F.2d 1326, 1330, 217 USPQ 753, 756 (Fed. Cir. 1983) (quoting *International Glass Co. v. United States*, 408 F.2d 395, 403, 159 USPQ 434, 441 (Ct. Cl. 1968)).

For the requisite conception to a 102(g) defense, there must be a contemporaneous recognition and appreciation of the invention. *Silvestri v. Grant*, 496 F.2d 593, 596, 181 USPQ 706, 708 (CCPA 1974) (explaining that "an accidental and unappreciated duplication of an invention does not defeat the patent right of one who, though later in time was the first to recognize that which constitutes the inventive subject matter"); *Invitrogen, Corp. v. Clontech Laboratories, Inc.*, 429 F.3d 1052, 1064, 77 USPQ2d 1161, 1169 (Fed. Cir. 2005) (stating, in situations where there is unrecognized accidental duplication, establishing conception requires

evidence that the inventor actually made the invention and understood the invention to have the features that comprise the inventive subject matter at issue).

Based on the applicable law and legal standard, Moldex's Prior Art Statement does not provide any legally tenable explanation for a 102(g) defense. The 1997 Grimsley notebook entry (and asserted weekly status report) recites:

modeling a more complete muff cup. Modeled the polypro portion and a version of the cup with the over-molded Kraton. Modeled the foam liner and the foam pad. Prepared FDM files for components of the muff cup assembly. Set up for a started weekend build. Reviewed muff cup assembly with Michael, Steve, Bern and Mark. Evaluating current conceptual design compared to existing designs. Considering likes, dislikes and options.

Moldex suggests this cursory, ambiguous note is somehow connected to images of muffs dated August 10, 1998, April 19, 2000 and May 19, 2000. But it is not clear what is shown in the images, and there is no indication that the images are tied in any way to the Grimsley notebook entry from three years before. These images, furthermore, are all dated after the filing of the '157 patent, suggesting that the alleged reduction to practice was post-filing and cannot, under these circumstances, qualify as prior art.

Moldex cannot carry a 102(g) prior art defense based on this information or based upon the explanation provided in its Prior Art Statement. Moldex has provided no explanation of what was actually done in 1997, whether it corresponds to what is claimed, or any other information supporting Moldex's 102(g) allegations. A muff can certainly have a portion which is polypropylene and features "over-molded Kraton" without the claimed "two mutually contiguous portions which comprise plastic materials with different properties in at least one respect wherein the hood has an outer surface and an inner surface." Moldex has established, at most, a potential random combination of materials that in no way demonstrates the conception

of the invention that 35 U.S.C. §102(g) requires. Even if Moldex had provided colorable evidence of conception, which it has not, the time delay between the alleged conception in 1997 and the alleged reduction to practice three years later would prevent Moldex from demonstrating that the subject matter was not abandoned, suppressed, and concealed. For all these reasons, Moldex's Prior Art Statement fails to properly explain or support the alleged 102(g) defense.

C. Moldex Fails to Sufficiently Explain other Invalidity Contentions

Moldex's Prior Art Statement is further defective for failure to articulate a colorable basis for Moldex's assertions that the alleged prior art anticipates or renders obvious the asserted patent claims.

It is axiomatic that for anticipation, each and every claim limitation must be explicitly or inherently disclosed in the prior art. *E.g., King Pharm., Inc. v. Eon Labs, Inc.*, 616 F.3d 1267, 1274 (Fed. Cir. 2010). "The anticipation analysis asks solely whether the prior art reference discloses and enables the claimed invention, and not how the prior art characterizes that disclosure or whether alternatives are also disclosed." *Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1324 n.6 (Fed. Cir. 2003) (internal citation omitted).

As demonstrated in the attached responsive charts, Moldex's asserted prior art fails to establish anticipation of the asserted patent claims.

To render a claim obvious, a combination of prior art references must disclose each and every claim element of that claim. The Supreme Court has made it clear that finding a claim invalid on "obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some ration underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (internal quotation omitted). At a minimum, then, Moldex's invalidity chart "must identify the

combinations of prior art showing obviousness.” See *High Point Sarl v. Sprint Nextel Corp.*, No. 09-2269, 2011 U.S. Dist. LEXIS 111158, at *25-26 (D. Kan. Sept. 28, 2011) (collecting cases); see also *Avago Technologies Gen. IP PTE Ltd. V. Elan Microelectronics Corp.*, No. C04-05385, 2007 U.S. Dist. LEXIS 97464 (N.D. Cal. Mar. 28, 2007) (suggesting that defendant’s invalidity chart must “reasonably specif[y]” the combination of prior art rendering a patent obvious); *Realtime Data, LLC v. Packeteer, Inc.*, No. 6:08-CV-144, 2009 U.S. Dist. LEXIS 114207 (E.D. Tex. Dec. 8, 2009) (disclosing over 500 references while purportedly “reserv[ing] the right to combine” them “result[ed] in an impossibly high number of combinations to reasonably serve the notice function contemplated by the [Local] Patent Rules.”).

As demonstrated in the attached responsive charts, Moldex’s asserted prior art fails to establish the obviousness of any of the asserted patent claims. Moldex fails to provide combination of references that a person of ordinary skill in the art would be motivated to combine as necessary to demonstrate the obviousness of any asserted patent claim. Furthermore, Moldex at one point vaguely suggests that “[i]n addition to an in conjunction with the prior art cited in the Claim Charts, the prior art included in Moldex’s Prior Art Disclosures Charts renders all of the asserted claims ... obvious.” (*Id.*). This type of general, non-specific allegation fails to provide the required complete and detailed explanation of Moldex’s invalidity positions.¹

¹ Moldex further fails to explain its misuse or indefiniteness positions as referred to only briefly near the end of Moldex’s Prior Art Statement. Neither of these affirmative defenses properly applies to the asserted patent claims or the infringement allegations in this case.

III. 3M'S RESERVATIONS REGARDING INVALIDITY CONTENTIONS

Moldex's Prior Art Statement suggests that Moldex may attempt to supplement or amend its invalidity contentions based upon the Court's construction of claim terms, through expert discovery, or otherwise. 3M reserves the right to oppose any such supplementation or amendment as non-timely or based upon other grounds. However, to the extent Moldex attempts to supplement or amend its invalidity contentions, 3M reserves the right to supplement and/or amend its Responsive Prior Art Statement based upon subsequent amendments or modification to Moldex's invalidity positions, based upon further discovery, based upon construction of claim terms, or based upon the Court permitting any such amendments or modifications.

Date: October 15, 2012

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**ATTORNEYS FOR PLAINTIFFS
3M COMPANY AND 3M INNOVATIVE
PROPERTIES COMPANY**

CERTIFICATE OF SERVICE

I hereby certify that on October 15, 2012, a copy of *3M's Responsive Prior Art Statement* was served upon counsel of record for Defendant Moldex Insurance Company as follows:

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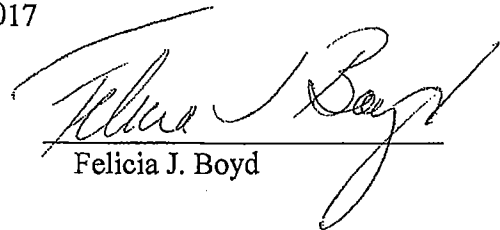

Felicia J. Boyd

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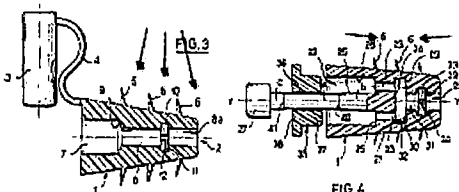
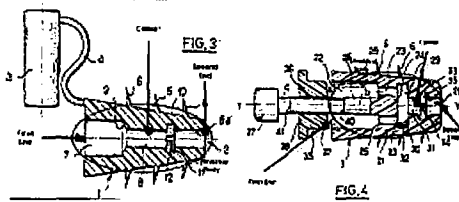
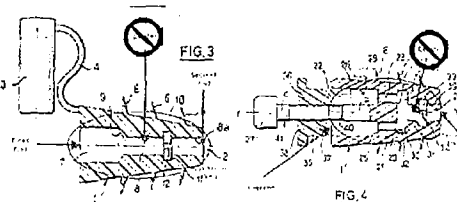
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Exhibit L: “Exemplary References”	81

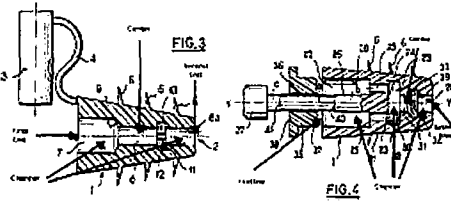
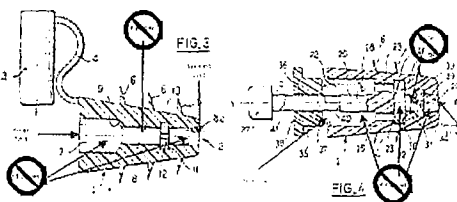
¹ Exhibit numbers listed herein reflect those from from Defendant's Prior Art Statement.

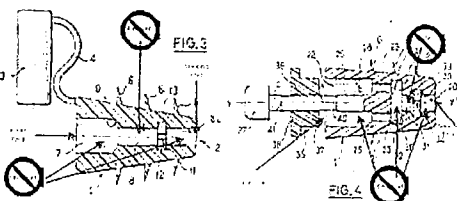
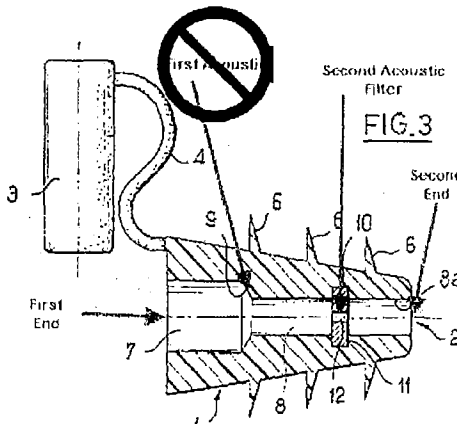
Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")	Exhibit A ² FR 2676642 to Dancer et al. ("Dancer")	
	Defendant's Statement ³	Plaintiff's Statement
Claim 1		
Summary:		3M denies that Dancer includes, discloses, teaches, discusses, identifies, suggests, or anticipates all of the limitations of claim 1. Therefore, Dancer does not qualify under 35 U.S.C. 102 as invalidating prior art for claim 1.
A hearing protector for selectively or automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:	<p>To the extent the preamble is limiting, Dancer discloses a hearing protector for selectively or automatically reducing noises having intensities up to 190 dB:</p> <p>"The invention concerns a hearing protection device comprising means for selectively attenuating exterior sounds and means for maximum attenuation, nonselective, of said sounds, the mode of operating in selective attenuation or in maximum attenuation being selected by a manually controlled obturator. Such equipment, which makes it possible to quickly select between two systems of protection, is particularly useful when the user is alternately exposed to loud noises that occur continuously or in impulses. This is the case, for example, of military aircraft or combat vehicle crews as well as infantrymen, who are exposed to continuous noises, sometimes at a high level (120 or 140 dB SPL), from engines, and occasional or intermittent impulse noises at high or even very high level (up to 190 dB SPL), such as noise from weapons." Page 3 (translation)(emphasis added).</p> <p>To the extent the preamble is limiting, Dancer discloses that the hearing protector is intended to be</p>	<p>3M denies that Dancer includes, discloses, teaches, discusses, identifies, suggests, or anticipates the preamble.</p> <p>3M admits that Dancer describes a hearing protector for selectively or automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user.</p> <p>However, 3M denies that Dancer includes, discloses, teaches, discusses, identifies, suggests, or anticipates a hearing protector for selectively or automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user and including all of the elements listed in subsequent limitations below.</p>

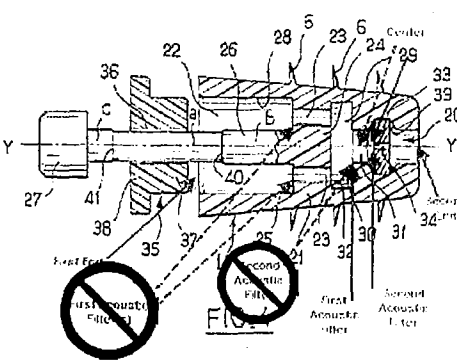
² Exhibit numbers listed herein reflect those from Defendant's Prior Art Statement.

³ From Defendant's Prior Art Statement. Footnotes from original are included at end of each limitation. Errors in original have not been corrected or flagged.

Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")	Exhibit A² FR 2676642 to Dancer et al. ("Dancer")	
	Defendant's Statement³	Plaintiff's Statement
	<p>sealingly inserted into an auditory canal of a user, such seal being achieved by flexible "annular flasks": "According to the invention, the hearing protection device of the type defined in the introduction is characterized in that it comprises an elongated flexible body intended to come into sealed peripheral contact with the walls of the auditory canal, the flexible body being axially traversed by a channel in which the selective attenuation means are located, and in that the obturator is integral with the flexible body." Page 2-3 (translation)(emphasis added); "Flexible annular flanges 6, integral with the outer surface of the flexible body 1, provide the seal between the body 1 and the walls of the auditory canal 5." Page 3 (translation)(emphasis added); Figs. 3 and 4 (annotations added):</p> 	
<p>a cylindrical body having a center, a first end and a second end;</p>	<p>Dancer discloses a cylindrical body¹ having a center, a first end and a second end, for example as depicted in Figs. 3 and 4 (annotations added):</p>  <p>¹ In fact Dancer discloses a non-cylindrical tapered cone. However, as 3M's erroneous contentions read this limitation on the BattlePlug which is also a non-cylindrical tapered cone, under 3M's erroneous</p>	<p>3M denies that Dancer includes, discloses, teaches, discusses, identifies, suggests, or anticipates this limitation.</p> <p>3M admits that Dancer includes a cylindrical body having a first end and a second end.</p>  <p>[Figure from Defendant's Prior Art Statement (annotations added).]</p>

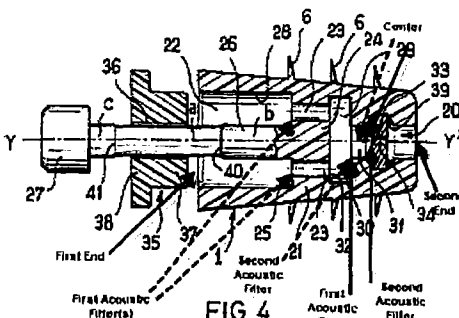
Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")	Exhibit A ² FR 2676642 to Dancer et al. ("Dancer")	
	Defendant's Statement ³	Plaintiff's Statement
	construction, the limitation is met by Dancer.	However, 3M denies that Dancer includes a cylindrical body having a center as taught by the '693 Patent, which must be located between the first and second acoustic filters. As Dancer has only one filter (<i>see</i> limitation below), it does not have such a center.
a channel extending from said first and second ends to said center of said cylindrical body; and	<p>Dancer discloses a channel extending from the first and second ends to the center of the cylindrical body, as depicted in Figs. 3 and 4 below (annotations added):</p> 	<p>3M denies that Dancer includes, discloses, teaches, discusses, identifies, suggests, or anticipates this limitation.</p> <p>3M admits that Dancer includes a channel extending between the first and second ends of the cylindrical body.</p>  <p>[Figure from Defendant's Prior Art Statement (annotations added).]</p> <p>However, 3M denies that Dancer includes a cylindrical body having a center as taught by the '693 Patent. <i>See</i> limitation above. Therefore, 3M denies that Dancer includes a channel extending from the first and second ends to the center of the cylindrical body.</p> <p>3M further denies that Dancer includes "said channel." <i>See</i> limitation above.</p>
said channel containing a first acoustic filter and a second acoustic filter, each of said first and second filters being in communication with one of said first and second ends.	<p>Dancer anticipates this limitation through its disclosure of multiple gauged openings to selectively filter the passage of sound waves: "Preferably, the selective attenuation means are passive means that ensure a non-linear acoustic transmission in the linking channel. Such transmission</p>	<p>3M denies that Dancer includes, discloses, teaches, discusses, identifies, suggests, or anticipates this limitation.</p> <p>3M admits that Dancer includes a channel containing a first acoustic filter, the first filter being in communication with at least one of</p>

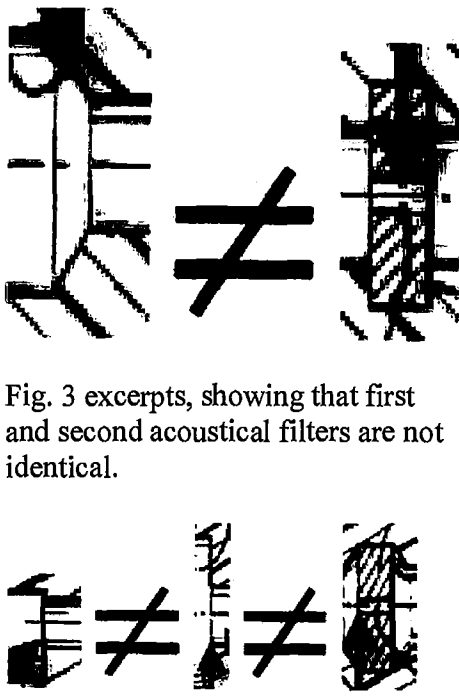
Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")	Exhibit A² FR 2676642 to Dancer et al. ("Dancer")	
	Defendant's Statement³	Plaintiff's Statement
	<p>is advantageously obtained when the channel has, at the downstream end, a transverse partition in sealed peripheral contact with the walls of the canal, said partition having at least one opening to ensure the continuity of the channel that connects the two ends of the flexible body and the openings being calibrated to allow a defined range of frequencies to pass." Page 3 (translation)(emphasis added).</p> <p>Dancer further anticipates this limitation, for example through the embodiment shown in Fig. 3 and its related description, as explained below.</p> <p>Dancer discloses a channel containing a first and second acoustic filter, such as constrictions, also called gauged openings, which are used to selectively attenuate sound waves: "With reference to figures 1 to 3, the channel 2 is composed of two main sections, 7 and 8, which are distinguished in particular by their different cross-section. The two sections 7, 8 each have a constant cylindrical cross-section but the upstream end of the section 7 is abruptly narrowed by an annular shoulder 9 the inside diameter of which is determined by the cross-section of the channel section 8. In the wall 8a of the channel 2, near the downstream end of the flexible body 1 an annular groove 10 is made in which a transverse washer 11 is held in peripheral sealed contact with the wall 8a of the channel 2. The washer 11 is composed of a more rigid material than that of the body 1, because it is important that it not be deformed when it is inserted into the</p>	<p>the first and second ends.</p>  <p>[Figure from Defendant's Prior Art Statement (annotations added).]</p> <p>However, 3M denies that Dancer includes a channel containing a first acoustic filter and a second acoustic filter, each of the first and second filters being in communication with one of the first and second ends. Dancer contains only one acoustic filter as taught by the '693 patent.</p>  <p>[Figure from Defendant's Prior Art Statement (annotations added).]</p> <p>For the embodiment shown in Fig. 3 of Dancer, the "First Acoustic," as labeled by Moldex, is not a filter as taught by the '693 Patent. Dancer describes this as an "annular shoulder" (see Dancer at p. 6 of the translation) and not a filter. Therefore, there is only one acoustic filter — the "Second Acoustic Filter" as labeled by Moldex.</p>

<p><i>Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")</i></p>	<p><i>Exhibit A²</i> <i>FR 2676642 to Dancer et al. ("Dancer")</i></p>	
	<p><i>Defendant's Statement³</i></p>	<p><i>Plaintiff's Statement</i></p>
	<p>ear. It can be made of a corrosion-resistant metal (such as stainless steel, chrome plated or gilded brass) or of a rigid plastic material (such as Altuglas or Teflon). Its outside diameter is between 2 and 5 mm, depending on its placement in the flexible body 1 and on the size of said body.</p> <p>The washer 11 has a central hole 12 calibrated to allow a defined range of frequencies to pass. The calibration of the hole can thus be adapted to allow frequencies not exceeding 3000 Hz to pass if it is desired that frequencies characteristic of speech transmission be allowed to pass (upper limit of 1000 to 3000 Hz) reaching, without noticeable attenuation, the inner ear of the user. The calibration of the central hole for a certain range of frequencies causes, in the presence of high level impulse sounds (more than 120 or 140 dB SPL), the formation of turbulences that hinders their transmission and results in a noticeable attenuation for the user. High, or even very high, intensity impulse sounds (up to 190 dB SPL) will be particularly attenuated because they strike the washer 11 and will only be able to pass through the calibrated opening 12 by undergoing strong attenuation." Page 6 (translation)(emphasis added); Fig. 3 (annotations added):</p>	 <p>[Figure from Defendant's Prior Art Statement (annotations added).]</p> <p>For the embodiment shown in Fig. 4 of Dancer, in the first way that Moldex describes this embodiment, there is only one filter — the "First Acoustic Filter" and the "Second Acoustic Filter" (each labeled by Moldex with dashed arrows) operate together as an adjustable single filter:</p> <p>"The succession of channel sections 22, 23, 29 and 31, with the interposition in the latter of the partition 33 with calibrated orifice, ensures, as in the embodiment of figures 1 to 3, a non-linear acoustic transmission that results in a selective attenuation of sounds based on the range of frequencies 15 chosen to pass through the calibrated orifice 34 in laminar form. The passage of high intensity sounds is affected by turbulences that attenuate them. High or very high intensity impulse sounds are blocked so that the user receives them extremely attenuated." (Dancer at p. 9 of the translation).</p>

<p><i>Asserted Claims of</i> <i>U.S. Patent No. 6,070,693</i> <i>(the "693 Patent")</i></p>	<p><i>Exhibit A²</i> <i>FR 2676642 to Dancer et al. ("Dancer")</i></p>
	<p><i>Defendant's Statement³</i> <i>Plaintiff's Statement</i></p>
	<div data-bbox="532 279 987 667"> <p style="text-align: center;">FIG. 3</p> </div> <p>As described and shown above, each of the first and second filters is in communication with one of the first and second ends. See also, e.g., page 7 of the Dancer translation: "Thus, when the channel 2 is not blocked by the plug 3, it places the eardrum of the user in communication with the outside noises. The structure of the channel ensures, between the two ends of the flexible body 1, a passive-type nonlinear acoustic transmission that results in a selective attenuation of sounds based on their frequency, intensity and nature (continuous or impulse sounds)." Page 7 (translation)(emphasis added).</p> <p>Dancer further anticipates this limitation, for example through the embodiment shown in Fig. 4 and its related description, as explained below: "A variation of embodiment will now be described, with reference to figure 4.</p> <p>The flexible body 1 is axially traversed by a channel 20 composed of a succession of cylindrical sections of different cross section which ensures a non-linear acoustic transmission. The flexible body 1 has in its median part a transverse partition 21 integral with</p> <div data-bbox="1011 279 1474 646"> <p style="text-align: center;">FIG. 4</p> </div> <p>[Figure from Defendant's Prior Art Statement (annotations added).]</p> <p>In the alternate way that Moldex describes this embodiment, the "First Acoustic Filter," as labeled by Moldex, is not a filter as taught by the '693 Patent. Dancer describes this as a "channel section" and not a filter (see Dancer at p. 9 of the translation). Therefore, there again is only one acoustic filter — the "Second Acoustic Filter" as labeled by Moldex.</p>

Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")	Exhibit A ² FR 2676642 to Dancer et al. ("Dancer")	
	Defendant's Statement ³	Plaintiff's Statement
	<p>said body and of the same axis Y-Y' as the flexible body 1. Said body is traversed by a plurality of orifices 23, only two of which are visible in cross-section in figure 4, but there are preferably six or eight of them and they have an axis parallel to the axis Y-Y'. The orifices 23 are situated on the same annular ring that delimits a solid zone 24 of the partition 21, on which is centered, on the face 25 turned towards the upstream end of the flexible body, a rod 26 with an axis Y-Y', cylindrical in cross section, integral with the flexible body 1 and the transverse partition 24. The rod 26 extends beyond the upstream end of the flexible body 1 and ends with a stop 27. Slidably mounted on this rod 26 is a plug 35 with an axis of Y-Y', composed of one of the plastic materials indicated for the plug 3 in the previously described embodiment.</p> <p>The orifices 23 are connected upstream to an annular space 22 defined between the inner wall 28 of the flexible body 1, upstream from the partition 21, and the rod 26. Downstream, the orifices 23 lead to a channel section 29 of the same axis Y-Y' as the flexible body 1. The downstream end of the channel section is abruptly narrowed by an annular shoulder 30 that defines the crosssection of the channel section 31 at the downstream end of the channel 20. In the wall of the section 31 an annular groove 39 is made, in which a washer 33 is maintained in sealed peripheral contact, similar to the washer 11 of the embodiment in figures 1 to 3, and traversed by a calibrated central orifice 34.</p>	

Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")	Exhibit A ² FR 2676642 to Dancer et al. ("Dancer")	
	Defendant's Statement ³	Plaintiff's Statement
	<p>The succession of channel sections 22, 23, 29 and 31, with the interposition in the latter of the partition 33 with calibrated orifice, ensures, as in the embodiment of figures 1 to 3, a non-linear acoustic transmission that results in a selective attenuation of sounds based on the range of frequencies chosen to pass through the calibrated orifice 34 in laminar form. The passage of high intensity sounds is affected by turbulences that attenuate them. High or very high intensity impulse sounds are blocked so that the user receives them extremely attenuated." Page 8-9 (translation)(emphasis added); Fig 4 (annotations added):</p>  <p>As depicted above, Dancer Fig. 4 discloses this limitation in several ways. For example, the constrictions at 23 act as first acoustic filters with respect to center 29, after which there are constrictions 31 and 34, either of which would satisfy the second acoustic filter limitation. Alternatively, the constriction at 31 could be considered the first acoustic filter with respect to the center designated by a solid arrow above, after which there is the constriction 34, which would satisfy the second filter limitation.</p>	

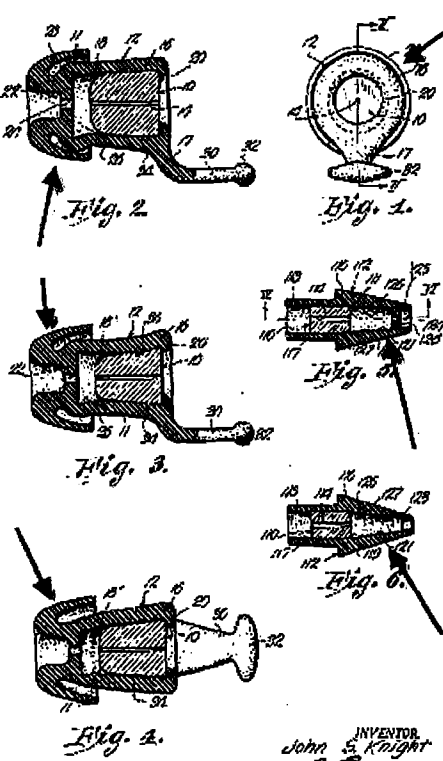
Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")	Exhibit A ² FR 2676642 to Dancer et al. ("Dancer")	
	Defendant's Statement ³	Plaintiff's Statement
	Dancer further discloses that multiple calibrated orifices can be used in yet other configurations and still be within the scope of its disclosures: "Of course, the invention is not limited to the embodiments described, and numerous modifications can be made thereto without going beyond the scope of the invention. Thus, instead of a single calibrated orifice, the partition can include a plurality of them in the form of holes or slots the cross section of which is smaller as they increase in number." Page 12 (translation)(emphasis added).	
Claim 3		
The hearing protector according to claim 1, wherein said first and second acoustic filters are not identical.	<p>Dancer discloses that the first and second acoustic filters are not identical, for example as shown below in excerpts from Figs. 3 and 4 (annotations added):</p>  <p>Fig. 3 excerpts, showing that first and second acoustical filters are not identical.</p> <p>Fig. 4 excerpts, showing that first and second acoustical filters are not identical, under any alternative</p>	<p>3M denies that Dancer includes, discloses, teaches, discusses, identifies, suggests, or anticipates claim 3, which depends on claim 1, for at least the reasons stated in connection with claim 1 above. Therefore, Dancer does not qualify under 35 U.S.C. 102 as invalidating prior art for claim 3.</p> <p>Furthermore, 3M denies that Dancer includes, discloses, teaches, discusses, identifies, suggests, or anticipates the first and second acoustic filters of claim 1. Therefore, Dancer does not include, disclose, teach, discuss, identify, suggest, or anticipate a hearing protector according to claim 1, wherein the first and second acoustic filters are not identical.</p>

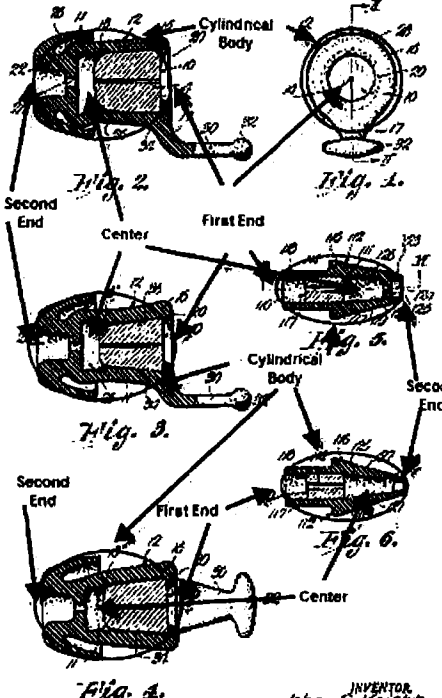
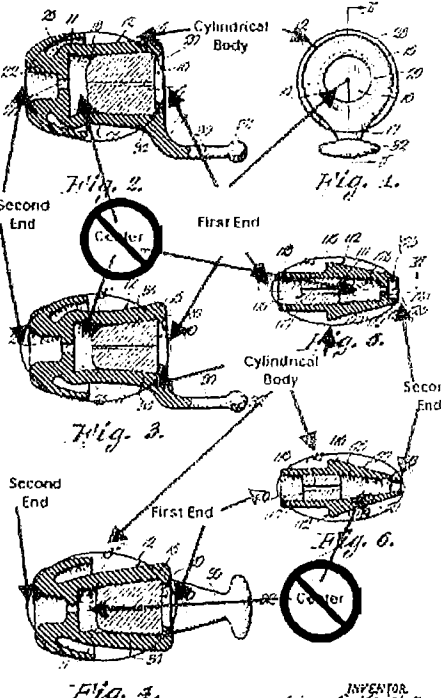
Asserted Claims of U.S. Patent No. 6,070,693 (the “693 Patent”)	Exhibit A ² FR 2676642 to Dancer et al. (“Dancer”)	
	Defendant's Statement ³	Plaintiff's Statement
	discussed above.	
Claim 17		
The hearing protector according to claim 1, wherein said acoustic filters permit non-linear filtration of sound.	Dancer discloses that its acoustic filters permit non-linear filtration of sound: “ Preferably, the selective attenuation means are passive means that ensure a non-linear acoustic transmission in the linking channel. Such transmission is advantageously obtained when the channel has, at the downstream end, a transverse partition in sealed peripheral contact with the walls of the canal, said partition having at least one opening to ensure the continuity of the channel that connects the two ends of the flexible body and the openings being calibrated to allow a defined range of frequencies to pass. ” Page 3 (translation)(emphasis added).	3M denies that Dancer includes, discloses, teaches, discusses, identifies, suggests, or anticipates claim 17, which depends on claim 1, for at least the reasons stated in connection with claim 1 above. Therefore, Dancer does not qualify under 35 U.S.C. 102 as invalidating prior art for claim 17. Furthermore, 3M denies that Dancer includes, discloses, teaches, discusses, identifies, suggests, or anticipates “said acoustic filters” of claim 1. Therefore, Dancer does not include, disclose, teach, discuss, identify, suggest, or anticipate a hearing protector according to claim 1, wherein said acoustic filters permit non-linear filtration of sound.

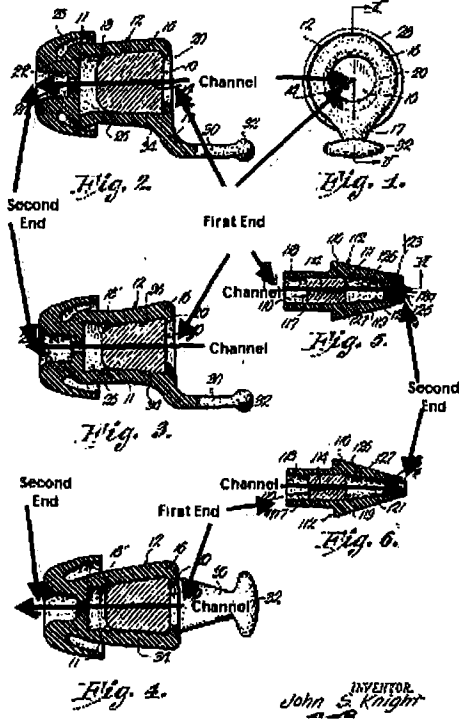
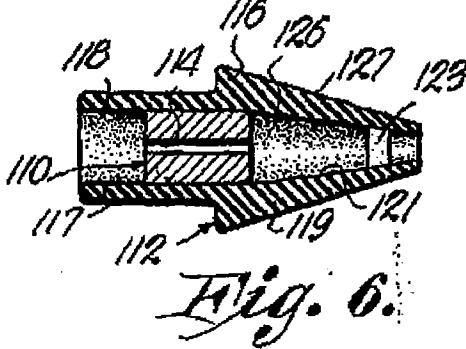
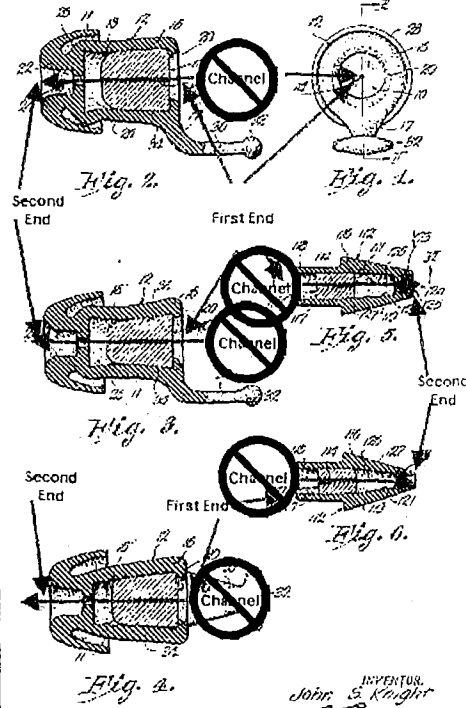
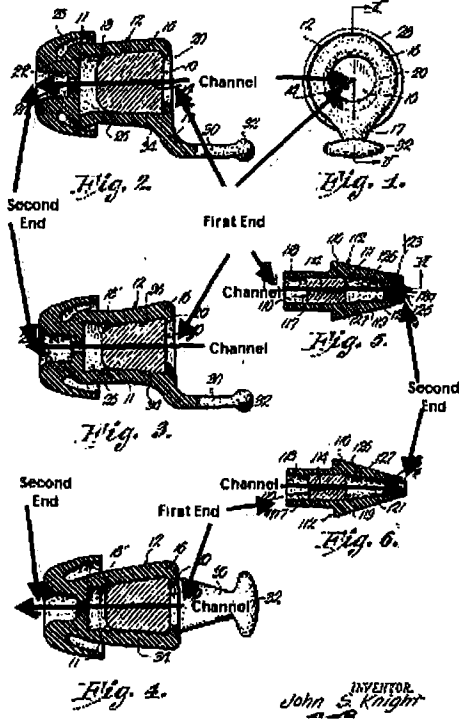
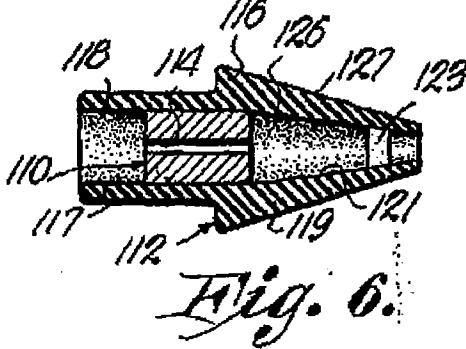
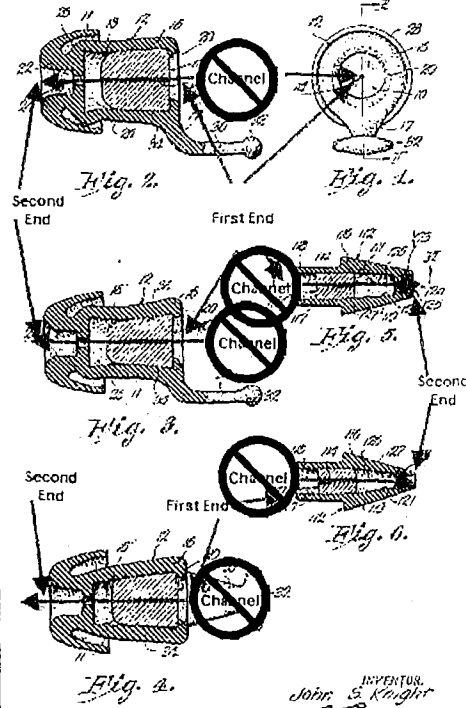
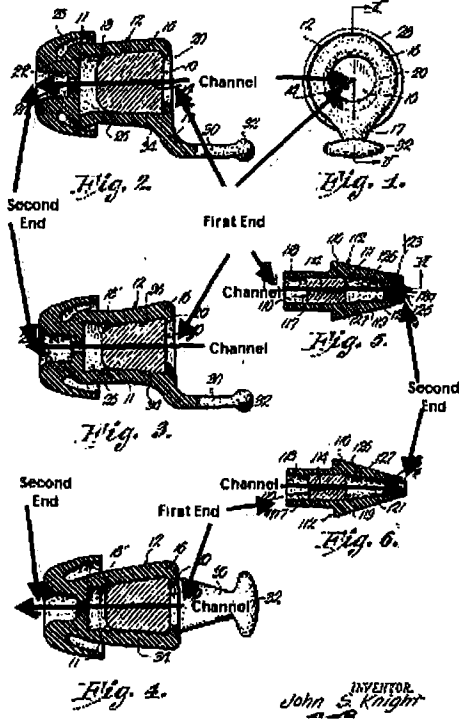
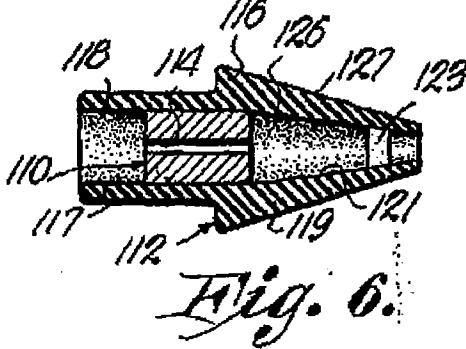
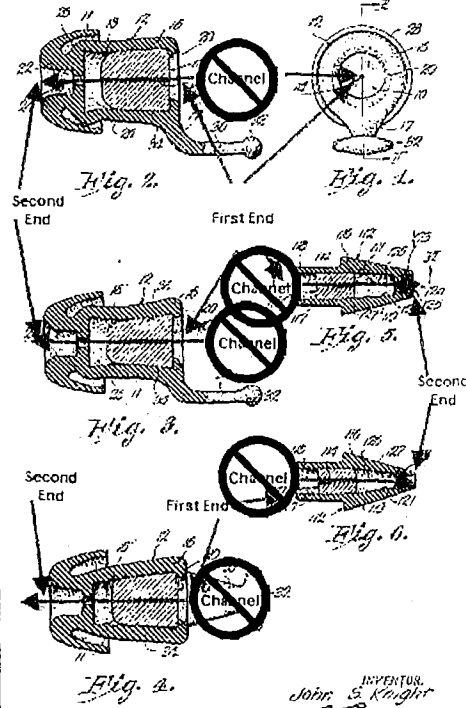
Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")	Exhibit B ⁴ US 2,717,596 to Knight et al. ("Knight")	
	Defendant's Statement ⁵	Plaintiff's Statement
Claim 1		
Summary:		3M denies that Knight includes, discloses, teaches, discusses, identifies, suggests, or anticipates all of the limitations of claim 1. Therefore, Knight does not qualify under 35 U.S.C. 102 as invalidating prior art for claim 1.
A hearing protector for selectively or automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user, the hearing protector comprising:	<p>To the extent the preamble is limiting, Knight discloses a hearing protector for selectively or automatically reducing noises having intensities up to 190 dB: "This invention pertains to hearing guards for preventing damage to the inner ear and contiguous brain sections due to blast, shock waves or excessive sound levels." Col. 1:15-17 (emphasis added); "Plug 10 has an elongated, axial bore 14 extending longitudinally therethrough to permit the passage of sound waves of frequencies encountered in normal conversation, a bore diameter of approximately .03 inch in a filter plug of approximately .25 inch in length and weighing in the neighborhood of .005 pound having been found satisfactory." Col. 2:12-19 (emphasis added).</p> <p>Knight further discloses a hearing protector being intended to be sealingly inserted into an auditory canal of a user, for example at 3:59-63: "The elliptical configuration is illustrated as the preferred form of this embodiment, since such configuration is normally adapted to provide a tight fit in the outer portion of a human ear under circumstances of maximum</p>	<p>3M denies that Knight includes, discloses, teaches, discusses, identifies, suggests, or anticipates the preamble.</p> <p>3M admits that Knight describes a hearing protector for selectively or automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user.</p> <p>However, 3M denies that Knight includes, discloses, teaches, discusses, identifies, suggests, or anticipates a hearing protector for selectively or automatically reducing noises having intensities up to 190 dB, the hearing protector being intended to be sealingly inserted into an auditory canal of a user and including all of the elements listed in subsequent limitations below.</p>

⁴ Exhibit numbers listed herein reflect those from Defendant's Prior Art Statement.

⁵ From Defendant's Prior Art Statement. Footnotes from original are included at end of each limitation. Errors in original have not been corrected or flagged.

Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")	Exhibit B⁴ US 2,717,596 to Knight et al. ("Knight")	
	Defendant's Statement³	Plaintiff's Statement
	<p>comfort." See also the structures depicted below:</p> 	
<p>a cylindrical body having a center, a first end and a second end;</p>	<p>Knight discloses a cylindrical body¹ having a center, a first end and a second end, as shown in the following annotated Figs. 1-6:</p>	<p>3M denies that Knight includes, discloses, teaches, discusses, identifies, suggests, or anticipates this limitation.</p> <p>3M admits that Knight includes a cylindrical body having a first end and a second end.</p>

Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")	Exhibit B⁴ US 2,717,596 to Knight et al. ("Knight") Defendant's Statement³	Plaintiff's Statement
	 <p>¹ In fact Knight discloses a non-cylindrical tapered cone in whole or part in its various embodiments. However, as 3M's erroneous contentions read this limitation on the BattlePlug which is also a non-cylindrical tapered cone, under 3M's erroneous construction, the limitation is met by Knight.</p>	 <p>[Figure from Defendant's Prior Art Statement (annotations added).]</p> <p>However, 3M denies that Knight includes a cylindrical body having a center as taught by the '693 Patent, which must be located between the first and second acoustic filters. As Knight has only one filter (see limitation below), it does not have such a center.</p>
<p>a channel extending from said first and second ends to said center of said cylindrical body; and</p>	<p>Knight discloses a channel extending from said first and second ends to said center of said cylindrical body, as shown in the following annotated depiction of Figs. 1-6:</p>	<p>3M denies that Knight includes, discloses, teaches, discusses, identifies, suggests, or anticipates this limitation.</p> <p>3M admits that Knight includes a channel extending between the first and second ends of the cylindrical body in the embodiments shown in Figs. 1 to 5.</p>

<p>Asserted Claims of U.S. Patent No. 6,070,693 (the "693 Patent")</p>	<p>Exhibit B⁴ US 2,717,596 to Knight et al. ("Knight")</p>				
	<table border="1"> <thead> <tr> <th data-bbox="516 268 998 325"> <p>Defendant's Statement⁵</p> </th><th data-bbox="998 268 1484 325"> <p>Plaintiff's Statement</p> </th></tr> </thead> <tbody> <tr> <td data-bbox="516 325 998 1967">  </td><td data-bbox="998 325 1484 1967">  <p>[Knight, Fig. 6]</p> <p>The embodiment shown in Fig. 6 includes a flange 123 that does not include a channel.</p>  <p>[Figure from Defendant's Prior Art Statement (annotations added).]</p> <p>However, 3M denies that Knight includes a cylindrical body having a center as taught by the '693 Patent. See limitation above. Therefore, 3M denies that Knight includes a channel extending from the first and second ends to the center of the cylindrical body.</p> </td></tr> </tbody> </table>	<p>Defendant's Statement⁵</p>	<p>Plaintiff's Statement</p>		 <p>[Knight, Fig. 6]</p> <p>The embodiment shown in Fig. 6 includes a flange 123 that does not include a channel.</p>  <p>[Figure from Defendant's Prior Art Statement (annotations added).]</p> <p>However, 3M denies that Knight includes a cylindrical body having a center as taught by the '693 Patent. See limitation above. Therefore, 3M denies that Knight includes a channel extending from the first and second ends to the center of the cylindrical body.</p>
<p>Defendant's Statement⁵</p>	<p>Plaintiff's Statement</p>				
	 <p>[Knight, Fig. 6]</p> <p>The embodiment shown in Fig. 6 includes a flange 123 that does not include a channel.</p>  <p>[Figure from Defendant's Prior Art Statement (annotations added).]</p> <p>However, 3M denies that Knight includes a cylindrical body having a center as taught by the '693 Patent. See limitation above. Therefore, 3M denies that Knight includes a channel extending from the first and second ends to the center of the cylindrical body.</p>				